PHOTO-ERA

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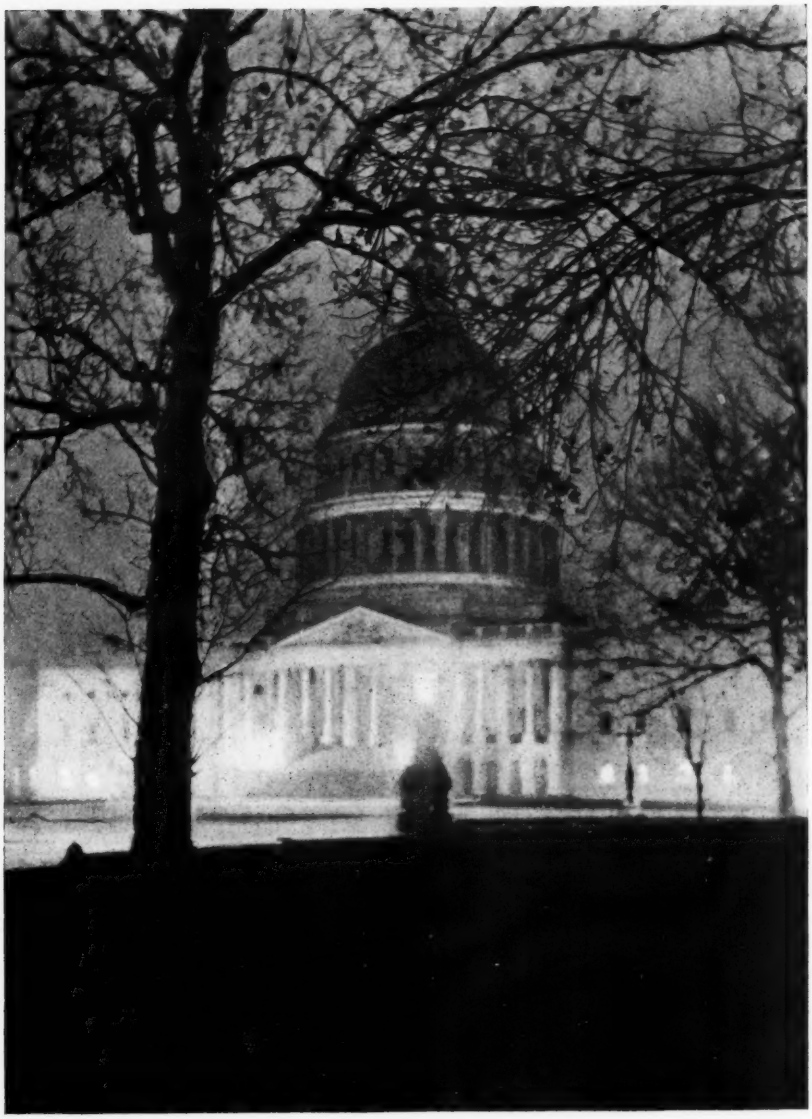


J. H. TARBELL
THE CAPITOL BY NIGHT
THIRD AMERICAN PHOTOGRAPHIC SALON

PHOTO-ERA

The American Journal of Photography

Vol. XIX. SEPTEMBER, 1907 No. 3

ISAAC HARRIS THE BREAKERS

Illustrative Photography

C. H. CLAUDY

THE general opinion of the average society of photographers seems to be that it is composed of artists, near-artists and others not quite so near. If there exists a photographic organization among amateurs not "devoted to the advancement of pictorial photography," they have kept the fact pretty quiet.

After you have all tired of howling "iconoclast," "sour grapes" and "photographic reactionary" at me, I should like to say — which will probably get me in very bad order indeed with all the pictorial fraternity — that if some other-world power were to suddenly sweep every single photograph which intends to be, or is, a picture off the face of the earth, mundane affairs would go on about the same; but if the same power attempted to remove photography from the sciences, and from commercial life, it would find it had a job on its hands, and its success would result in a complete reorganization of many phases of life.

The facts of the matter are — no matter what one would like to have them — that the pictorial side of photography is its least important side. That it is the pleasantest and, in pure enjoyment, the most profitable to follow is probably the reason why it is the main end and aim of nine out of ten club-members and a great many amateurs not connected. There is inborn in all of us the desire to create. A few have the gift: they draw, model, play the piano, sing, design, build, construct. Others have not the ability but have the longing. The camera offers a means to the creation of — well, of creations (sic!). It provides all necessary technic of drawing, and produces results in monotone which, to be equaled by any hand-process, would take years of practice and then some, and finally would n't be equaled after all! So, of course, we all use the camera and "create" to our hearts' content; and after a year or so, when we understand some of the principles of photography, and can make fairly decent negatives and prints, we join a society, see exhibitions, read the magazines, attend two art-lectures, read one art-book, and behold! we are artists! Overdrawn? Perhaps; but I know a lot of fellows whose work is hung and praised and they are no more artists than I am!

Listen: I, even I, herewith set down as a scoffer, have had pictures on the walls of good exhibits; I, even I, have heard artists rave over one or two of my efforts and point out the one to the other how I had "handled" this and "placed" that, and how I had "controlled" the light and "subdued" the detail, and a whole lot more that was as manna to a hungry man in the desert or a bunch of stale bread to a hobo out of a job, although, all the time, I knew the artists were making fools of the two of us. For never a bit had I controlled or subdued or arranged or otherwise done things strange and terrible to my picture — I thought it pretty, photographed it where it looked prettiest to me, made a print and sent it in! I hit it; that was all. Arguing in my favor, you may say, as one good pictorialist friend did say, that it was my "instinctive artist knowledge born within me which enabled me to select and get the effect I wanted!"

It may be. For all I know, I am an unheralded Milton, a Whistler in disguise, a Beethoven whom no one ever heard play, a male Jenny Lind. But if the truth were to be told, I would say that I took this picture because I thought it was pretty, having no mortal idea of the various things I was credited with doing; and no more have nine out of ten of the rest of the camerists who pose as pictorialists. Please do not misunderstand me. There are certain earnest men and women who study art, who strive with all their might and main to make the camera a pliant tool to render outwardly the art that is in them. They have my utter respect and admiration, the same I grant to any earnest student of any art. But for the rest of you — or the rest of us — who use a camera Saturday afternoons and Sunday mornings, who have landscapes by the ten thousand and presentable pictures by the twos and threes, who now and then strike it just right and pose on the strength of those lucky hits as artists, we are neither the one thing nor the other; and did we devote our talents to something we could understand without a lifetime of study, we would put our time to better use.

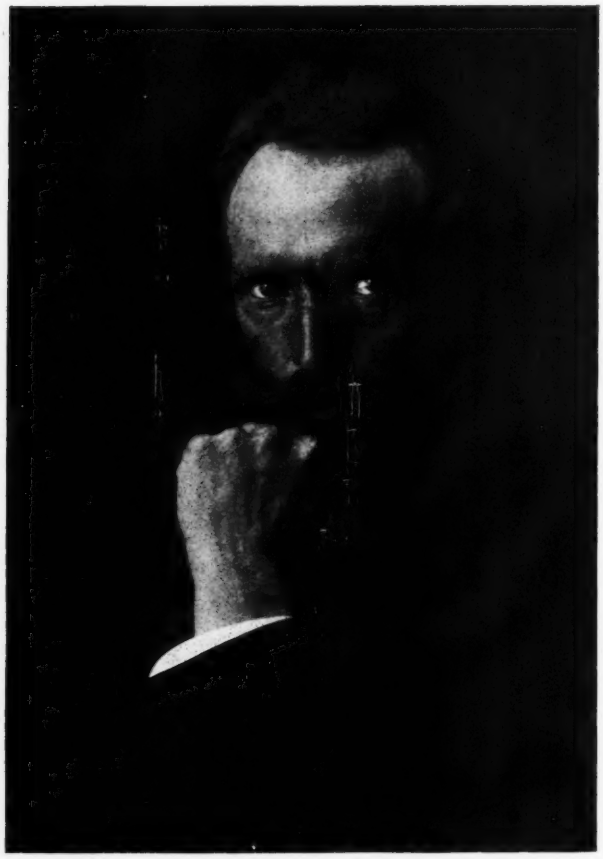
Art takes a lifetime. Have you any use for the stage-struck girl with half a voice who studies without intelligence and can "sing" nothing but arias, and in Italian at that? Have you any use for the would-be pianist whose attainments stop at two "pieces" and a few pyrotechnics? Do you admire the work of the girl who "sketches a little" or "paints bits" and calls the result "art," with a big A? The girl with a voice who sings popular songs and goes no further than she can go with understanding; the pianist who knows his limitations and plays dance-music, rag-time and light opera for himself and his friends, pretending to be nothing that he is not; the girl who does needlework and burns things in wood and laughs if you ask her why she does n't study painting — these are the ones who know their capabilities and their lack of capabilities, and, surely, they are more sane than the first group outlined above.

Now the camerist who does n't really study art, who knows a few elementary principles and makes "pictures" by the light of these willow rushes, whereas, with a good understanding of practical photography, he might make plain photographs with the light of the sun, is, to my mind, on a much lower plane than the despised record-of-fact man. The one tries to do something he cannot do — for lack of knowledge he is too lazy to acquire; the other does something he can fully understand, in the best possible way. I have the same respect for the record-of-fact man who does the best possible record-of-fact work, over the half-baked would-be pictorialist, that I have for a first-class maker of chairs, over my amateur friend who thinks he can carve in wood and — cannot!

I know two girls. One plays at the harp, one of the most difficult of instruments, and plays nothing but what she calls "music with a soul." The other plays the banjo, and plays it well — not like a professional with seemingly twenty fingers; but so she can sing to it, and so you want to dance to it. One knows her capabilities and does her best; the other, perhaps, does her best too, but she is blind to the possibilities of her own nature.

I found out my pictorial limitations some time ago, I am glad to say, and I compromised between the cold-wire-drawn efforts of the record-of-fact man and the beautiful, the truly beautiful, photographic pictures which are made by the people who have studied the art-side of it, and which I would be only too glad to make, if I could. It is n't that I have n't the photographic skill — for I can do most stunts with a camera — but that I have n't the education in art-lines. I know a man whom I can lick to a finish in any photographic competition — and I know more in a minute than he does in a week about the science of photography — but he makes pictures whenever he wants to; he can find them without looking for them. Incidentally, he is an architect. He has studied one of the most noble of the arts for years.

Well, I compromised. When I make a photograph nowadays — that is, unless it is a special try at a portrait or something similar in scope — I try first to make it a good photograph and, secondly, to make it illustrative. And I believe it is a very good compromise between the "would-make-pictures-if-I-could-but can't" and the "could-make-records-if-I-wanted-to-but-don't" attitudes. As



L. O. GRIENWALDT CONCENTRATION

such, I recommend it to all of you who are not artists, who have not the time or the inclination to study to become artists, and who are continually doing your inefficient best to make a picture you do not know how to make, or what's wrong with it when an artist condemns it!

Nor am I posing as a master in the art of illustrative photography, either! But I know what an illustrative photograph ought to be, in most cases, and when I fail it is more often through force of circumstances than through lack of knowledge why; so you will understand that an illustrative photograph is not so particularly hard to learn how to make.

But when I am confronted with the task of telling you just what illustrative photography is, and know you will not be satisfied if I say that it is photography

B. F. LANGLAND A MISTY DAY IN THE MOUNTAINS

that illustrates, and some one whispers, *sotto voce*, "What you can clearly conceive you can clearly express," I feel like the dog with the can tied to his tail — he wants to put it between his legs and cannot, and he wants to run and is afraid, and he wants to get rid of the incubus and does not know how. So he yelps!

To say that illustrative photography is photography which illustrates is begging the question. Yet that is a true statement. Illustrative photographs, in contradistinction to those which are not illustrative, are photographs which show something besides the mere objects of which they are pictures. For instance, a picture of a phonograph is a photograph, pure and simple. Three pictures of three phonographs are three photographs, pure and simple. But three pictures of three phonographs, in one of which a man speaks into the tube, in another a man listens to the horn and in the third a man cuts from the cylinder the record just made, are all illustrative photographs, inasmuch as they suggest all and show much of the operations connected with the running of a phonograph.

An illustrative photograph tells a story, in which particular it partakes of the nature of the *genre*, and all pictorialists will agree that pictorial photography is as hard as *genre* photography. But it is possible to tell a story in an illustrative photograph, or a set of them, without the photographs either having life in them or being in the least pictorial. Successive views of the big Baltimore or San Francisco fires were highly illustrative and told a big story, yet a full set may well have contained not a single human figure.

An illustrative photograph is interesting for what it shows, not for its pictorial excellence. If it can be illustrative and pictorial too, it is of course so much the better photograph. But if it can be but the one or the other, and it is illustrative first, it will hold attention longer and catch it quicker than the mere picture, unless it is something very superior indeed in the picture line, in which case it does not belong in an album or portfolio, but on the wall.

I once went to some trouble to make the following experiment. I procured from photographers whose pictorial work is considered excellent, of a good standard although not the highest, a set of pet prints. I put these in an album, and sandwiched between them various photographs of a purely illustrative character and having no pictorial beauty whatever. These were all made by various photographers whose work is entirely illustrative and never for pictorial effect. When that album is shown it is invariably the pictures which get the praise and the admiration, but it is also invariable that the illustrative photographs are looked at the longest and most commented on; and when I am asked for copies of the pictures in the album, it is usually for copies of the illustrative photographs!

Illustrative photography is a field which lies close at the door of every one, regardless of where he lives. It is possible to obtain a collection of illustrative photographs anywhere which will catch and hold interest, be instructive and even commercially valuable. It is a field that any one can enter with a moderate amount of study, and is free to those particularly who, through lack of innate ability or education, are unable to become pictorialists of any rank. Its practice teaches the eye to see and the mind to act quickly, its results have permanent value, and its proportion of successes, which cannot be marred by so little a thing as will utterly spoil a true picture, are much greater than in pictorial work.

It seems to me, who have been able to grasp my own limitations and had sufficient common sense to admit them to myself, that there are many photographers trying to make pictures to rival the artists with the amount of light an artist would require for a sketch only; men and women trying to produce pictorial results without any true foundation to build on, who would do well to throw up the game at once, except in occasional instances, and devote their time to making photographs of an illustrative character. They would thus have an end they could encompass with the time at their disposal, would not be constantly outclassed with the efforts of men whom, by reason of natural gift or long study, they cannot hope to equal, and would be producing results which would be of value to themselves and of value to those who esteem pictures for their intrinsic interest, rather than for their conformation to the rules of art.

The Witchery of the Sea

WILLIAM FINDLAY

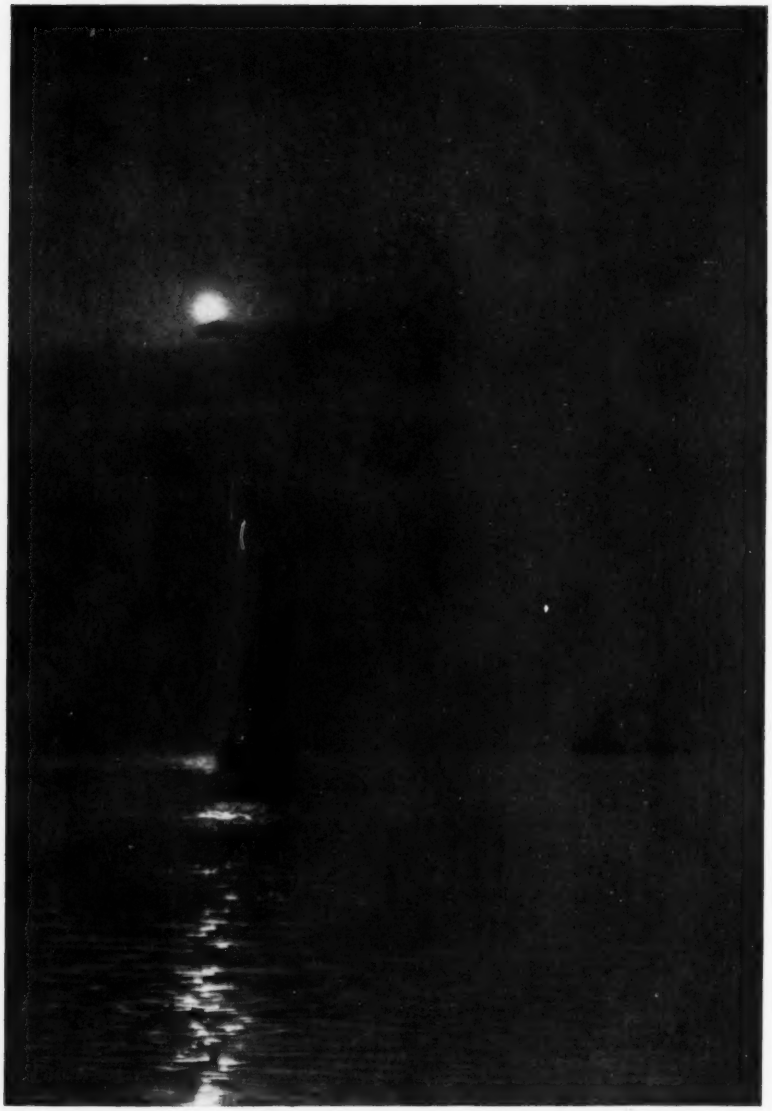
WHEN one first comes into possession of a camera and falls a victim to the most virulent disease, "photographic fever," plates are profusely used on all subjects. The beauty-spots in the immediate vicinity are soon overdone; friends and pets are requisitioned as models, with varying success; and very soon many of those who started out on their photographic careers with high hopes find themselves in the position of Alexander the Great, with no more worlds to conquer. Happily, however, others find, after the "preliminary canter," that it is best to specialize. There lies latent in almost every breast artistic feeling. It may run to flowers, trees, books; the running brooks or the witchery of the sea may captivate one. But whatever it is, all else should be put in the background and every plate used in furtherance of the specialty selected. Thus only can an assured success be attained.

Personally, I have been bewitched by the sea; and, although occasionally circumstances compel me to make excursions to other domains, I cannot put the same "heart" into the subject as is claimed by the sea-pictures. And what scope there is, too! What variety of moods! So illimitable a subject!

Residing, as I do, on the east coast of Scotland, there cannot be secured the soft twilight-effects so dear to the heart of the dweller in the west, and to get the best effects one has to be abroad in the early morning. Fortune has favored me in this respect, and from April till September my first glance on leaving work in the morning is towards the east. Should the sky look promising, a hurried walk is made homewards, the camera shouldered, the bicycle mounted and a speedy run made to the pierhead! Many a morning the clouds have dispersed before the point is reached, and then there is very little use of waiting; for, having to photograph against the sun, uninteresting pictures result unless the orb is obscured by clouds. Still, such a morning can by no means be wasted if attention is directed to shipping-studies, and wonderful reflections are to be had.

At other times there are no clouds about at all, but a soft haze spreads itself over the ocean, and the rays of the sun are considerably retarded. This is an ideal morning, and under such conditions "Reminiscent of a Dutch Painting" was secured. Again there is a lovely setting for a picture — beautiful clouds, with the sun just breaking through, and a responsive water-effect. But fortune does not always smile upon you by sending along some craft at the psychological moment to put "life" into the photograph, and without this one may keep the plate unexposed. It saves labor, expense and worry.

Occasionally the fates are kind, however, and "Nature's fleeting masterpieces" pass before your gaze in rapid succession. A favoring wind may send some haddock-boats home in ample time for the market, and if the wind has a touch of the east in it they come sailing up the channel in fine style and afford ample opportunity for a nice discrimination. I have exposed eight plates on



WILLIAM FINDLAY
REMINISCENT OF A DUTCH PAINTING

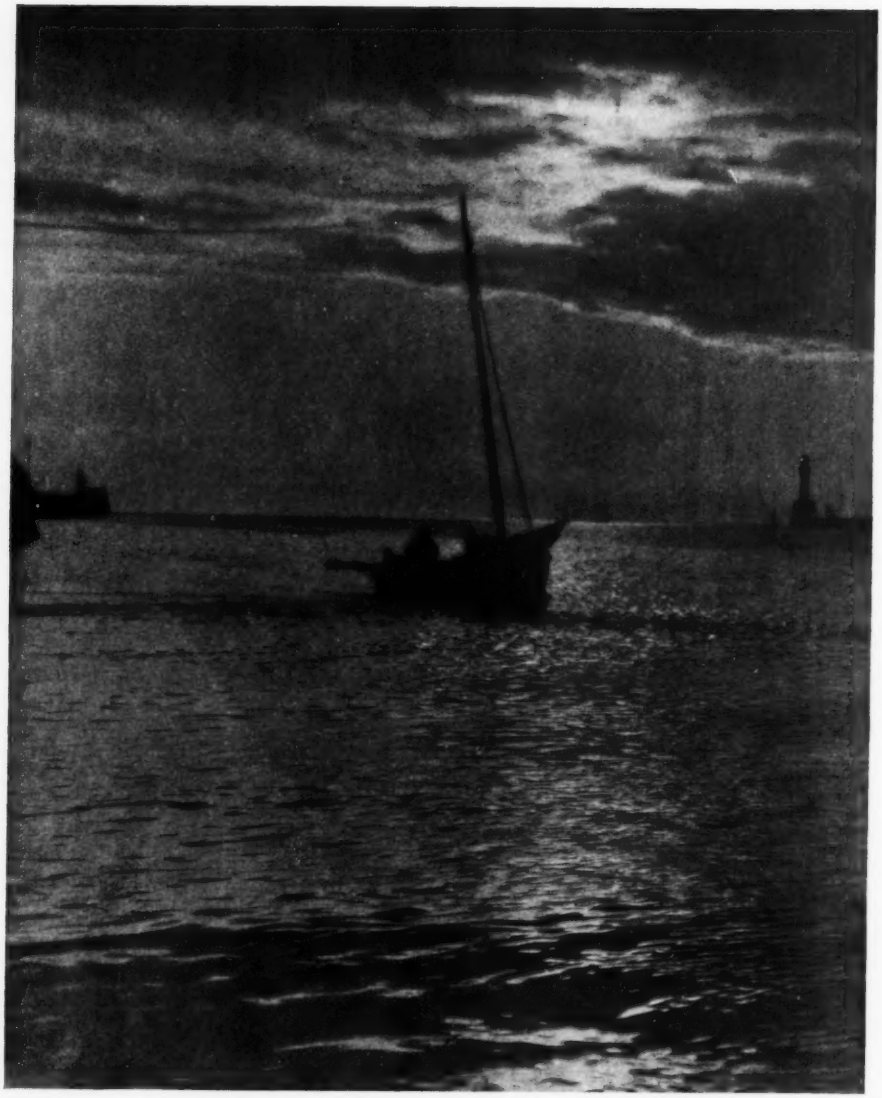
WILLIAM FINDLAY A MOONLIGHT-EFFECT

such a morning. I think at least a couple would suffice nowadays. When a contrary wind blows it is still possible to get pictures of sail-boats, and very often when the wind is westerly the cloud-effects are best. It is possible to catch a fishing-boat being towed in by the mast-head, as in "A Head-Wind." The fishermen tack for the North Pier, and when they reach it, a portion of the crew clamber up the steps, and, by a rope attached to the boat's mast, tow it to its berth. In such a case it is best to wait until the boat is close upon you before making the exposure. I did not discover the pictorial possibilities of this combination of circumstances until quite recently.

Another variation is to get the salmon-fishers returning from an examination of their nets along the coast — and such a picture may in process of time become rare.

A motor-boat has appeared on the scene this year, and still more are to follow. I have included this "innovation" in one of my pictures this year, but I prefer the old-fashioned "coble" when "the brown sails fade from sight."

I find this a most interesting specialty, and I trust what I have said may prove helpful to some inlander on a holiday by the seashore, and even to a dweller in a city by the sea, who knows that she is smiling and surly in turn, but has not courted her sufficiently to become acquainted with her various intermediate moods — and they are many.



WILLIAM FINDLAY
A HEAD-WIND

Exposure in Enlargement

F. H. JEFFREE

WHILE in negative-making the factors governing exposure are well understood, and most exposures are calculated from the known data, in enlarging it is generally considered impossible to arrive at the correct exposure except by a series of trials on slips of bromide paper — a method which wastes much time, and does not tend to the production of uniform results. Yet both problems are essentially similar, and the latter may be solved as readily as the former if we can only rightly gauge the density of our negative, which corresponds to "character of subject" in negative-making, and the effective aperture at which the lens works under the conditions of enlargement.

No.	Negative	Density (D)	Exposure (E)	Multiplier D×(E+1)²	Remarks
1	River scene	1	2·55	13	Standard Negative
2	Mrs G.	1½	2·0	14	
3	Group on porch	1½	2·15	15	
"	"	"	4·35	43	
4	The Mill	8	2·0	72	

FIG. 1

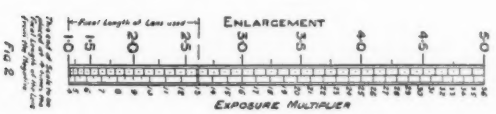


FIG. 2

This is the crux of the whole matter, and some writers have expressed the opinion that the intensity of illumination is not in this case governed by the law of inverse squares, and that therefore it is not possible to solve the problem except by the usual trial-and-error method. The law is, however, of universal application; and when correctly understood and applied, no more difficulty will be experienced in computing the exposure for enlargement than is met with in the more usual problem of negative-taking.

The rule is, gauge the intensity of the light falling on the negative by means of an actinometer, and calculate the exposure as in negative-taking (multiplying by a suitable subject number to represent the density of the negative), and then *multiply the exposure so found by the square of the linear enlargement plus one.* Thus if we wished to enlarge a quarter-plate negative to 12 x 10 in., or, to speak more accurately, to enlarge a part 4 x 3 in. to 12 x 9 in., i. e., a linear enlargement of 3, we multiply the exposure as ordinarily found by $(3+1)^2 = 4 \times 4 = 16$.

There remains the question of density of negative. An unstained negative of just sufficient density to give a plucky print on P. O. P. will be our standard, and in negative-taking would correspond to an ordinary landscape without dark

WM. S. RICE A SUBMISSIVE TRIMMING

objects in the foreground, or a subject number of 1. Such a negative will take about sixty times as long to produce the print spoken of below as the paper in Watkins' exposure-meter does to attain standard density; i. e., one minute for every second. Having settled on the standard, any other negative may be compared with it by making a contact-print of the two negatives at the same time, and noting the time each takes to produce a harmonious print; i. e., *not* the time to produce a print suitable for toning and fixing, in which, as printed, the shadows are all blocked up, but that which *looks* right as printed and not fixed — a proof, in fact. Thus if the standard negative took ten minutes, and that from which we wish to enlarge took twenty-five, the density would be reckoned $2\frac{1}{2}$. A note-book as shown in Fig. 1 is useful, as we can have the particulars entered and worked out beforehand, in readiness for the opportunity to enlarge.

If a set of standard conditions is determined on, however, the procedure may be simplified even more. The writer always uses F. 16 for enlarging, and usually works on Barnet P.M. bromide paper, which has a speed No. 40 (Watkins). Using Watkins' meter, it will be found that with the above conditions the necessary exposure is determined by taking the actinometer time and multiplying it by one-tenth of the multiplier given in the fifth column, Fig. 1.

The manipulation of the enlarging-apparatus may also be simplified if a scale such as is shown in Fig. 2 be attached to the baseboard. The figure is ac-

curately drawn to scale, and may be enlarged to suit a lens of any focus by noting that the total length of the scale is just three and one fifth times the focal length of the lens used. The end of the scale marked 1.0 is to be placed at four times the focal length of the lens from the position of the negative. Having settled on the desired amount of enlargement, we place the carrier for the bromide paper directly over the number, and manipulate the lens only until we obtain sharp focus, when we shall find that the image is of the required size, thereby saving the tedious trial-and-error process usually necessary to obtain the correct position. With the scale has been incorporated the corresponding exposure multiplier numbers $(E+1)^2$, thereby saving even this simple calculation.

It will be found a great aid to rapid centering of the enlargement if lines enclosing the portion to be enlarged are ruled on the negative in India ink; or a black paper mask may be employed for the same purpose.

With the aid of the devices mentioned, and one or two others to enable rapid changes of negatives to be made, the writer has had no difficulty in making a dozen enlargements from a dozen different negatives in the course of an afternoon; the exposures being made in rotation, without a single trial, and all developed in a batch, subsequentlv all proving entirely satisfactory.

For those interested in the mathematics of the foregoing the result is arrived at as follows. We commence with the well-known formula:

$$\frac{1}{F} = \frac{1}{f_1} + \frac{1}{f_2}$$

where F = the principal focus of lens, f the distance from lens to negative, and f_2 the distance from lens to bromide paper.

Remembering that the size of the image is proportional to the distance from lens, we get that

$$f_1 : f_2 : : 1 : E,$$

where E = the linear enlargement.

Then $f_1 = \frac{f_2}{E}$

Substituting this value of f_1 in our first formula, it becomes

$$\frac{1}{F} = \frac{E}{f_2} + \frac{1}{f_2}$$

On solving we get that $f_2 = F\ (E+1)$; i. e., that the working-focus has been increased in the ratio $E+1$.

Applying now the law of inverse squares, we get that the working-intensity of the lens is diminished in the ratio $\frac{1}{(E+1)^2}$ as given above.

Since $f_1 : f_2 : : 1 : E$,

$$f_1, = \frac{f_2}{E} = \frac{F\ (E+1)}{E}$$

and the total distance from the negative to bromide paper (ignoring a small correction for the separation of the nodes of admission and emission)

$$= f_1 + f_2 = \frac{F\,(E+1)}{E} + F\,(E+1) = \frac{F\,(E+1)^2}{E}.$$

This is the basis on which the distance scale has been constructed.

Finally, the method of calculating the exposure by Watkins' actinometer is based on the formula that

$$\text{The exposure} = \frac{D.\,A.\,S.}{4\,P}$$

where D = U. S. No. of diaphragm; A = time taken by actinometer paper to attain standard tint; S = subject No. (ordinary view = 1); P = plate (or paper) speed.

For enlarging, this has to be multiplied by $(E+1)^2$. Calling this the multiplier M, we get that

$$\text{The exposure} = \frac{M.D.A.S.}{4\,P}$$

Adopting F. 16 (U. S. No. 16) as D, and a plate speed P = 40, we get

$$\text{The exposure} = \frac{M \times 16 \times A \times S}{4 \times 40} = \frac{M.A.S.}{10}$$

Now $S \times M = D \times (E+1)^2$ (Fig. 1), so we arrive at the result that using F. 16 and a paper with a speed of 40, the exposure is equal to the actinometer time multiplied by the number in the fifth column of our note-book, and divided by ten. An equally simple relation will be found to hold with other papers, stops and makes of actinometer.— *The Amateur Photographer, London.*

F. S. ANDRUS — A BED OF CHRYSANTHEMUMS

J. R. PETERSON

THIRD AMERICAN PHOTOGRAPHIC SALON

THE WAVE

H. A. ROBERTS — EARLY MORNING

PORTLAND CAMERA CLUB

How To Make and Use a Duplicator

JOHN BOYD

THE making of any unusual picture is regarded with so much wonder by the uninitiated that we of the inner circle are apt to feel that the producer gets altogether too much credit for his work. This may or may not be so merited, but at any rate the production of these double, freak or spirit pictures is sufficiently interesting to be better understood than it is. The means by which they are made consist of such simple contrivances that it is strange we do not see more of them used.

Of course the results are not high art, and may never win a medal or obtain a diploma; but they will nevertheless earn the commendation of your friends, and may even contribute to the making up of a successful story, as I shall hereafter point out.

Very good "double" pictures can be made with the aid of the disc device, which is nothing more than a metal lens-cap, with part of the circular front cut away, and which are obtainable in a neat form for a few cents at any stock-

house. These, of course, confine the worker to a pair of exposures on the same plate, yet many amusing as well as useful combinations are possible.

The secret of success with this or any of the succeeding devices is to blend or vignette the two exposures into each other in such a way as to conceal the place where they come together. This the segment article will not always do, as it is purchased; but it is easily made right, if large enough to permit of adjustment.

The first thing to do is to divide the ground-glass of the camera into four equal parts by drawing a line across its center when placed horizontally, and another intersecting this, when set up for perpendicular views. This will give a dividing-line to work by — a guide for future operations.

Next put the duplicator over the front of the lens, and note how much image shows on the ground-glass. If it gives more than what covers half of the plate it is useless, and should be returned, if possible, to the maker or dealer. If this cannot be done, cement or glue a piece of stiff, black cardboard or heavy paper over the disc, allowing it to extend over the segment one-eighth of an inch. Now see how it works. Suppose it does not permit the image to come up to the center line. Then it will have to be pared down gradually, until the dark side of the ground-glass extends up to within a quarter of an inch of the line. Now turn it around, so that the image is shown on the opposite side of the focusing-screen, being careful to see that both sides bring the two images together in the same way at the center line. One will likely have now noticed the necessity for care in making this preliminary test. One will have seen the gradual blending of the fully-lighted view, which first began about three-eighths of an inch from the center line, and gradually lessened until the image disappeared altogether about the same distance beyond the center. This blending is the crucial point; it either makes or mars the resulting negative.

It is absolutely necessary when adjusting the duplicator on the front of the lens to get the straight edge of the segment perfectly perpendicular or horizontal, according to the way one is composing the shape of the picture. Failing in this, one will have a portion of the negative unexposed. This is one of the things that this simple device leaves to the care of the operator, and on his skill in setting it depends the future of his composition.

I purpose now describing an improved duplicator, which was devised by myself many years ago, and which is here presented in print for the first time. It is made of cardboard, is light and compact, and serves its purpose completely. The back is of heavy card, with a round opening corresponding to the size of the lens. A collar of cardboard fitting around the latter is attached to the back, and is for the purpose of facilitating application. A and B are slides running in a groove, and C is a permanent center which divides the image into two parts, the light reaching the lens and ground-glass alternately, through the small sections on either side. To use the device, we apply it to the lens, first closing the slide A, so that it covers the opening to the left of C. This, of course, shuts off the light from the opposite side of the ground-glass! The subject is arranged, and the exposure made. We then close slide B, so that it covers the opening to the right of

J. R. PETERSON

PORTLAND CAMERA CLUB

WAVE ACTION

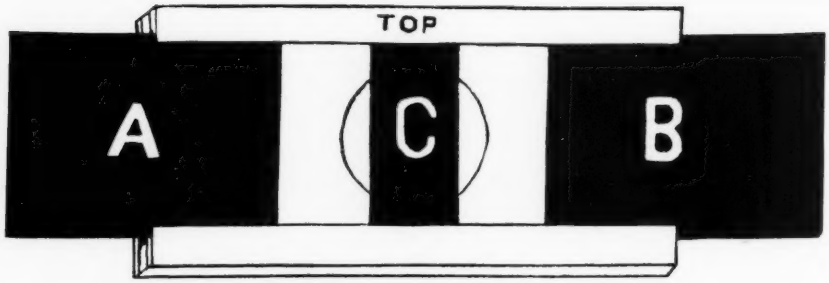


DIAGRAM OF DUPLICATOR

the center, at the same time opening slide A. This puts the balance of the view on the opposite side of the screen. We transfer the subject to this side, and expose as before. The great utility of this device is that the openings are formed by the straight lines of C, no matter how the duplicator is attached to the lens. We can thus place our subjects in any position, feeling sure that when the two exposures are made the entire plate will be covered, and without a center dividing-line. As all duplicating-devices cut off a great amount of light, it is better that, after the subject is placed, we remove the attachment and examine the focusing. This ensures sharper definition than with the attachment in place.

Regarding the exposure: we must use the lens without inserting a stop, the device acting as a diaphragm whose value is about f.32. This means, of course, that with it in place you give the same exposure as if stopping the lens to f.32.

Now let us look about us for subjects. They will naturally suggest themselves to the enthusiastic camerist; but in order to set his "think-box" a-going, let me name a few. Man boxing with himself; man wheeling himself in a barrow; man up a tree throwing down apples to himself; gentleman introducing lady friend to herself; man fighting a duel with himself with seconds looking on, etc., etc. We could go on and on, and fill pages, but what's the use? The world is full of subjects, and the ubiquitous amateur may be depended on to find them.

We may also put this device to more practical uses, and gain for ourselves grateful thanks, and not a few dollars. A few of my own experiences will illustrate this more fully.

Two chums had been out fishing. They had not had an opportunity to be together for years, and were anxious to have a picture of themselves with whatever catch they made. Luck was against them that day, and only a few fish were caught, but they wanted a picture with even these few. This was their story, and, while it appealed to my sporting-blood — for I had gone through the same experience — it brought to mind my photographic skill with the duplicator.

I therefore selected a suitable location for the view, got one of the subjects lying down with the entire catch spread out before him — but not without a remonstrance from both, for one felt that he was getting more than his share; the

other, that he did not have any. I said, "All right; now don't worry; we'll have this thing right in a minute." I then exposed on number one, and replaced the slide. I next rearranged the fish over in front of number two, and made that section of the picture. The result was such a surprise to the fishermen that they seemed to never get over telling how that "durned fellow with the camera made them catch sixteen fish that day, when 'b'gosh' they had only eight between 'em."

A few years ago I came similarly to the rescue of a party of deer-hunters who had had a streak of bad luck. There were nine men in the party, and they had only five deer to show for their two weeks' hunting. They did n't mind the small bag, but they rather rebelled against posing in front of such a slim result. I

THE MAGIC OF THE DUPLICATOR

listened to their tale of woe, and outlined my plans, which would "increase" the number of deer. They had doubts about it proving satisfactory, but would remember me gratefully if it turned out all right. I first directed a tree to be cut down, of sufficient length to string ten deer upon. This done, I had the five deer strung nicely along one-half of it, taking care not to overrun the center. In front of these I placed five of the hunters, exposed the plate, then slid the deer along to the other side of the pole, and placed the remaining four men in front of them. The exposure was then completed, and, as planned, it was an entire success. Of course, I was cautioned not to give the deal away, and I do so now only without mentioning names or place, and for the benefit of the photographic fraternity.

On another occasion a commercial traveler and his wife wanted a negative made of themselves together. He had to catch a train in a short time, and she, womanlike, had to dress up for the occasion. Before the latter was accomplished

S. S. SKOLFIELD WINTER

PORTLAND CAMERA CLUB

it was time for the gentleman to leave for his train. The camera being in position, the duplicator was slipped on, the man's image recorded, and when my lady arrived she was similarly pictured. In this way the two got their photographs, made an hour apart, and without the necessity of both of them being there together.

This little device was also the means of restoring friendship between two men who had quarreled, and whom we will here call "A" and "B." Many efforts had been made to reconcile them by their friends, but without success. Then it was arranged to invite them the same day to a picnic, each going there without the knowledge of the other, in the hope that it might be possible to bring them together and restore the good feeling. It was there I learned of the affair from the peacemaker, whom I shall call "C." I suggested that a photograph be taken of the two shaking hands. At this "C" shook his head; he said it was next to impossible — they would never do it. Outlining briefly what I meant, and what I thought could be accomplished, he said he would arrange to give it a trial.

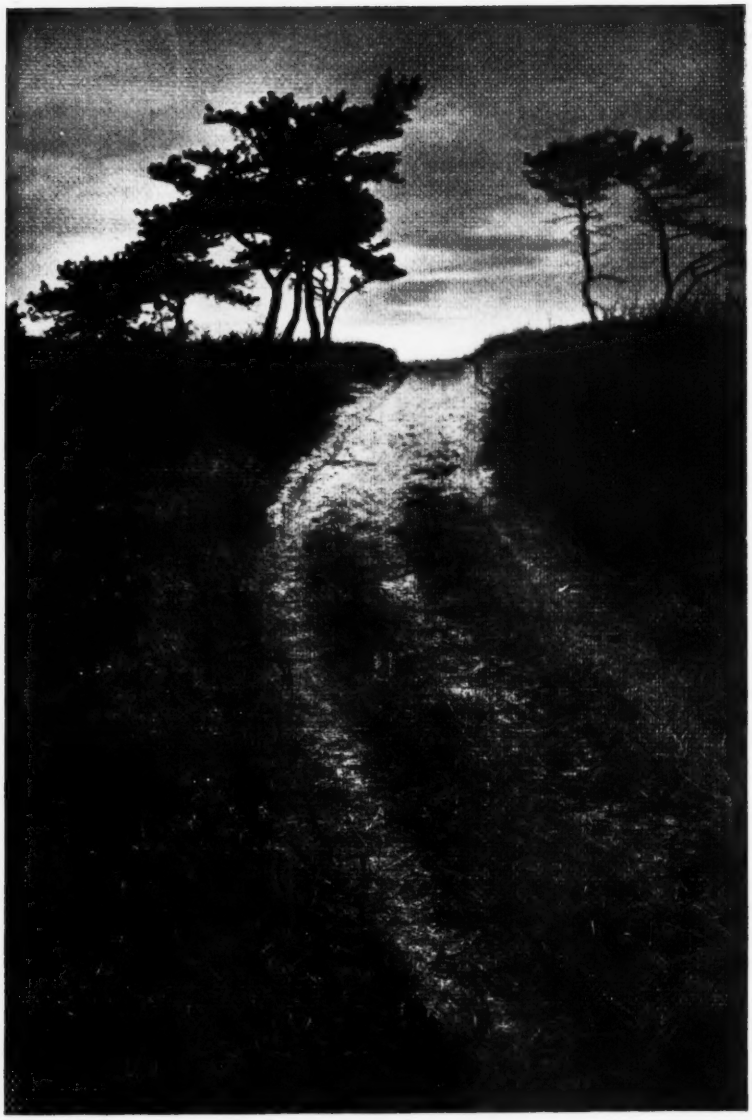
"A" was first brought along in front of the camera, his arm extended to grasp that of "C," a smile of greeting beaming over his face. Back of him were several other acquaintances, which I thought wise to introduce in order to assist the reconciliation, if such were possible. The exposure for half the plate was

G. E. FOGG LATE AFTERNOON, WINTER
PORTLAND CAMERA CLUB

then made. Then "B" was sent for, "A" being taken away from the vicinity by some of his friends. For this part of the picture, "B" took the place formerly occupied by "C," while "C" stood in the step-marks first occupied by "A." The same arrangements prevailed in this part as in the other, except that I brought in a new set of friends as a background for "B."

The result showed the two with arms extended, a hearty smile on the face of each, and a pleased group looking on. When the finished prints were presented to the principals, accompanied, as they were, with the friendly counsels of the peacemaker, they agreed to let the past be forgotten, and to resume their friendship. Thus it was that the freak, toy, or whatever one may call it, came to be the reconciler of a quarrel, performing its offices without any ostentatious display, but bringing the result about in a quiet manner.

These are evidences where the duplicator fills in a niche, and a good substantial one at that; so don't despise the little instrument, or regard it as a toy, or even as the perpetrator of impossible things, for one can employ it in accomplishing much more than do many of those who now use it, but fail to think of its further advantages.



J. R. PETERSON
CREST OF THE HILL
PORTLAND CAMERA CLUB

A Rapid Action Printing-Frame, and Its Possibilities

O. H. TODD AND O. VON ENGELN

WE two were planning to get out from three to five hundred developed post-cards in one afternoon, in order to put them on sale on the very day of the occurrence which they were to illustrate. Rapid methods were being discussed. The negatives could be dried rapidly by giving them a soaking in alcohol after washing. Printing by daylight would require only a few seconds for each card. The printer could drop each card from the printing-frame in to the developing-solution, and the second man could then take care of its development and fixation. After washing, rapid drying could be effected by placing the cards face down on muslin stretched over a frame, set up with one end a foot higher than the other, a lamp at the lower end, the chimney of which, being two or three feet below the under surface of the cloth, would supply a current of heated air, which would then flow from the lower to the upper end of the frame. Add a draught from an open window to carry away the water-vapor from the drying cards, and one had the best conditions for this operation. A small percentage of glycerine in the last washing-water would ensure the prints drying flat.

On reviewing the operations it appeared that the ones which would consume the most time were, first, making the negative ready for printing (masking, etc.), and, second, adjusting the paper to the negative and fastening in the back of the frame.

The latter was the worst. Have you ever stopped to think that the printing-frame we use is nothing more than a relic of the days of printing-out paper, when one had to open half of the frame to see how far the printing had gone — an antique among the photographer's tools that has not kept up with the progress in other lines? Consider; one must dexterously place the paper over the negative with one hand, and with the other fit in half of the hinged back, then release one's hold on the paper, and spring in first one half, and then the other half of the back. Of course the printer becomes deft with practice and does all this mechanically, yet it consumes a disproportionate amount of time when printing, and, moreover, is tiring.

Obviously, here was a chance for improvement. We exclaimed simultaneously, "Why not devise a frame which will open like a book?" Then started inventive scheming to utilize this idea. It remained, however, for the premier author of this article, who is the mechanical genius, to evolve the frame we used. And while he was about it, he made it to cover a multitude of sins.

How often have you been annoyed by these little troubles: the picture was on the negative crooked, and the paper had to be adjusted carefully to it each time, or else the print carefully trimmed to eliminate the "leaning tower of Pisa"

effect from the vertical lines of the buildings, or to prevent all the water of a lake running off the scene? Or the trouble of holding a film negative in place while printing, solved crudely by sticking it fast at the edges to a clear glass plate? Or the trouble of getting a print from a certain portion of a plate larger than the size of paper used? With this frame all these troubles cease. Simply adjust the negative (if a film, lay it on a clear glass plate as usual), with reference to the opening in the front, so that it will appear as you wish it, and then spring it fast, and, presto! it is in place for any number of prints, each exactly like the rest. Of course, if your negative is crooked you must sacrifice part of it in making your prints square; on the other hand, if the negative is correct, just as much of it can be utilized with this frame as with the old-fashioned type.

There remains the point of rapid loading and unloading. This is accomplished with one movement. One hand holds the frame while the other pushes the paper into the opening, and then snaps the spring over the pin. At first blush it may seem difficult to unclamp this spring quickly; but if one places the thumb at its angle, and presses down, and, at the same time, presses out with the forefinger placed on the edge of the spring where it engages the pin, it works very smoothly. To clamp it, a simple downward pressure with the thumb at the angle is all that is necessary.

The description below will enable any one to make the frame, or have it made by a local cabinet-maker. We have no patent on it; we offer it freely to the photographic community as a time-saver, reserving only the right to exhibit it at the photographers' convention at Dayton, O., in August, in competition for the prize offered for the best new device shown.

Figure 1 shows the frame open ready to receive the negative. All necessary dimensions are shown for a frame to print post-cards from a 5 x 7 negative. The method of making the joints is plainly shown in the cut. This makes a strong construction for thin strips. The wood should be well seasoned, whitewood, basswood or other soft wood, as the soft woods are not so liable to warp as the hard woods. The thin one-half inch wide strip is about one-sixteenth inch thick, and is glued and tacked on after the main frame is finished. The reason for doing it in this way is that it is easier thus to get a plane surface on which to rest the negative, and then put on the strip, than to make the whole from one solid piece. The parts of the frame which come in contact with the film side of the negative are covered with black felt, to avoid scratching the film, and to make up for any slight inequalities of the surface. This shows in the cut.

The springs are made from hard sheet-brass about one thirty-second of an inch thick. The combination hinge-springs at the back of the frame are made by bending the hard brass into the shape shown, and soldering to a small brass hinge. The two hinge-springs on the back of the post-card clamp should each be one-half the width of the catch-spring in order to have equal pressure all over the card.

From the dimensions given it will be seen that the space inside of the strip is large enough to permit any part of the negative to be brought over the open-

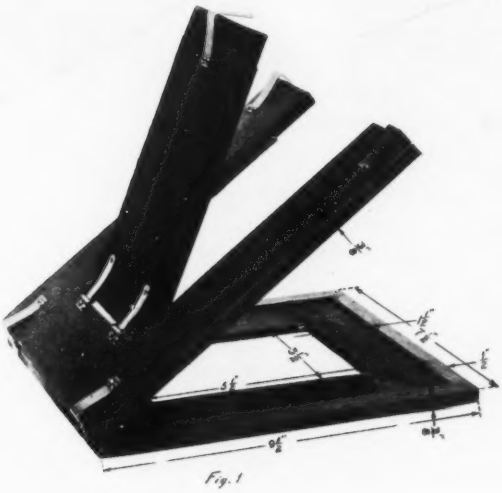


Fig. 1

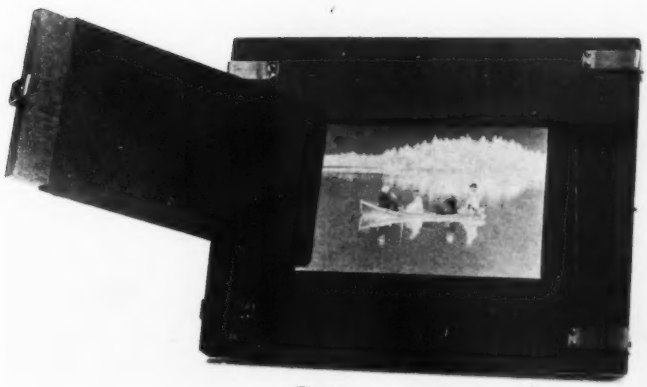


Fig 2.

A RAPID ACTION PRINTING-FRAME

ing. This frame will also work equally well with 4 x 5 negatives, by using a mask to cover the part of the opening not covered by the negative.

Figure 2 shows the frame with the negative in position. Note the fact that, although the edge of the negative is not parallel with the edge of the frame, the water-line of the view shown is horizontal. The negative, once placed in position, is held absolutely rigid, and thus all prints are printed from the desired part of the negative without losing time in placing the paper or card in the right position each time.

As stated at the beginning of this article, we used this frame for making a large number of post-cards in a very short time. With it we were able to print four cards per minute (each card requiring an exposure of from seven to eight seconds), which was as rapidly as the second man could put them through the developer and fixing-bath. With more rapid exposures, and not stopping to develop, this speed was tripled. The progressive photographer will readily see the possibilities for profit in this. For example, a flashlight of a banquet of a large convention (why not even the photographers' convention!), or a snap-shot of a parade, printed on post-cards and offered for sale before the event was over, at ten cents each, would sell like the proverbial hot cakes. If you are strong on calculating costs and profits, look this over: cards at about two dollars per gross, more or less, according to whose you buy, or one and one-half cents each, developer and labor cost one-fourth cent each, commission to salesman or stores two cents each; a total cost of not more than four cents each, or a net profit of six cents on each card.

Using this frame puts the photographer also in a position to handle large commercial orders (calling for thousands of prints from one negative in some cases) very rapidly and cheaply. In fact, its advantage is apparent in any case where a number of prints from one negative is wanted.

Criticism in Circulating-Albums

B. F. LANGLAND

THE prime factor in the advance made in pictorial photography has been, and will be, the desire to excel. The amateur working alone along pictorial lines sooner or later realizes that he can make no further progress, and that he is handicapped by being obliged to work without help. He has no standard by which to measure his work, and feels that he must know whether he is in advance or behind his fellow-workers. It is to fill this want that exhibitions are held, and that associations are formed for the purpose of circulating albums to contain the best work of members.

For purposes of comparison these albums are of great value, as is anything that serves as an incentive to bring out the best there is in us, and these circulating-albums do in a measure serve this purpose. But when, in addition to this

WILLIAM SHEWELL ELLIS
SUSAN B. ANTHONY

E. E. CHENEY THE GATHERING STORM

opportunity to compare work, members are invited to criticize the efforts submitted, their value is questionable. Not that a photograph should not be criticized, or that it is either above or below criticism, but that the great majority of amateur photographers are lacking in knowledge of even the first rudiments of art, and, when they attempt to criticize, they are as apt to praise that which is bad, and to find fault with that which is good, as they are to do the contrary.

Criticism, to be of any value, must be founded on a correct conception of art-principles. What good can it do any one to know that Smith thinks this picture good, or that one bad, if he does not know, at the same time, that Smith's opinion is founded on correct knowledge of what an artistic picture should be?

In looking over the criticisms in circulating-albums one finds many of them written by persons who apparently have acquired a smattering knowledge of art phrases, and who apply their stock phrases to the picture criticized without

ANNA C. RAY MAIDENHOOD

any true knowledge of their meaning. Indiscriminate criticism of this nature is destructive in its tendency. It is too often an attempt of the blind to lead the blind. As Ruskin says in speaking of children learning to draw, "The danger is that they will learn to like the wrong things unless carefully instructed, and their taste and style gradually formed and developed, and restrained if seen going in the wrong direction."

If the earnest amateur, anxious to improve in his work, pays serious attention to many of the criticisms appearing in these circulating-albums, he is in danger of learning to like the wrong things.

The true aim of criticism is constructive and it cannot be this unless it comes from a source that can be relied upon — from a critic whose criticism is founded on knowledge.

Photography and the X-Rays

MALCOLM DEAN MILLER, M.D., AND F. J. GARBELL

WHEN Professor Roentgen in 1895 discovered that a Crookes vacuum-tube produces invisible actinic light capable of affecting the photographic plate, the medical world realized at once that a very practical weapon in the fight against disease had been placed at its disposal. Thousands of physicians took up the study of the new agent, and, as its wonderful properties became known, the public press exploited it as a cure for many diseases. As in the case of radium, many of the claims made for the X-rays have been proved ill-founded, but eleven years' experience has reared a structure of solid facts of the greatest value to humanity.

Like many another great discovery, that of the X-rays was accidental. A loaded plate-holder happened to be left in the laboratory with some metallic object resting on the slide. When the plates were developed, a shadow of the object was brought out. Investigation proved that certain substances possess the power of screening out the visible light from the tube and allowing only the X-rays to pass, the action being comparable to that of the yellow ray-filters so well known to photographers. From these substances are made fluorescent screens, by means of which one may see the bones of the hand in beautiful detail. The whole art of X-ray photography, or radiography, depends on the fact that substances of different density are unequally pervious to the rays, the muscles and skin allowing them to pass unimpeded, whereas bone, steel, lead, bismuth salts and many other bodies offer great or complete resistance and therefore cast shadows. An X-ray photograph has been defined as "a record of density, produced by the Roentgen rays, and made in accord with the laws of projection" (Dr. Hickey). No lens nor camera is used, the plate simply being encased in daylight-proof envelopes, and the part of the body to be taken placed in contact with it between the tube and the sensitive surface.

"To-day the X-rays occupy a most important field in surgery. The treatment of fractures has been revolutionized by their use, so that no surgeon considers that he has used all the diagnostic methods at his command until he has studied the X-ray plate. Formerly many rare and obscure fractures, dislocations and simulated conditions could not be diagnosticated, but the X-ray plate makes the diagnosis easy and certain" (Dr. Mihran K. Kassabian). Take, for instance, a splintering of a small bone, which may occur without loss of function, abnormal mobility, dislocation or any other classic sign of fracture; or the separation of the epiphysis (the growing part of the extremity of a long bone); or a dislocation. The only difficulty in such a case would arise from incorrect interpretation of the facts recorded on the plate; since the picture is not a photograph in the ordinary sense, and one has to guard against erroneous impressions of perspective. In fact, the art of interpreting the plate requires long experience, and many eminent operators depend largely on others to guard them against mistakes.

Another great field of the rays is in the treatment of skin diseases. They have been used too universally and recklessly here, and some unfortunates have found to their cost that they are capable of very destructive burning of the healthy tissues; yet when intelligently used they give very beneficial results. Such diseases as chronic eczema, psoriasis, tuberculosis of the skin, many diseases caused by vegetable parasites and certain "new growths," as keloid tumors

F. J. GARBELL BULLET IN KNEE

Large Dark Shadow is the Knee-pan

and skin cancer, are greatly improved or cured by X-ray treatment. Only an expert, however, should attempt their use. In general, morbid tissues are destroyed or their growth checked by the rays. In disease of the blood-forming organs, the bone-marrow, spleen and lymphatic tissues in general, very remarkable cures have resulted from raying the bones and the enlarged spleen. The more superficial the disease the more readily the rays exercise a curative action. Many cases require a combination of surgery and X-ray treatment.

Recently Professor W. B. Cannon, of Harvard, has contributed some very important facts to the surgery of the stomach and intestines. The normal actions of these organs have been investigated in cats by feeding them with meat

F. J. GARBELL
FRACTURE OF THE LOWER TIBIA AND FIBULA
PINS IN DRESSING SHOWN

mixed with salts of bismuth, by means of which the passage of the food is studied with the fluorescent screen. Working with Dr. John Babst Blake, Dr. Cannon compared the results of the various operations on the stomach, and showed the great superiority of one of them in nearly restoring normal function.

Space forbids too extended a reference to the manifold uses of the X-ray, yet I feel that this review would be inadequate without reference to the work of Dr.

F. J. GARBELL NEEDLE IN WEB OF THUMB

F. H. Williams, of Boston. It is now well understood that consumption (pulmonary tuberculosis) is essentially a curable disease when taken in hand at an early stage. Dr. Williams has shown that the X-rays give exceedingly valuable facts in the study of the chest and lungs, and has been able to make earlier diagnosis by combining the facts thus obtained with the other data available.

With this incomplete glance at the present status of the Roentgen rays, let us now take up the photographic side of the subject more fully. Every X-ray operator has his own favorite apparatus and methods, but a trip through the department at the Boston City Hospital is as good an illustration as any. Let us suppose you have brought a friend, an emergency case, who has a needle broken

F. J. GARBELL
CALCULUS IN LEFT URETER
DARK SPOT AT LEFT OF SPINAL COLUMN IS THE CALCULUS

off in the palm of the hand. These cases are *bêtes noirs* to the surgeons, on account of the difficulty of precisely locating the fragment. The patient is asked to place the hand on a firm support, such as a table, a plate is placed on the hand, a sandbag is put on to prevent movement and the tube brought under the table at a distance of fifteen to thirty inches from the plate. The operator explains that it is an ordinary rapid dry-plate, such as a Stanley or Lumière Sigma, with the emulsion-side towards the face of the yellow envelope on which notes regarding the case are written. A black envelope is inside of this for complete protection. The stock of plates is kept in a lead-lined box. Everything being ready, the current is now turned on and an exposure of four or five minutes is given. Afterwards the operator permits you to look through the fluoroscope. Placing it close to the hand, you see all the bones in fine detail, and the needle, a clear black object, lying in the translucent flesh.

The exposure completed, you are invited into the dark-room. The first thing which strikes you is the large size of the ruby-light, which is a window provided with several sheets of ground-glass, as well as with ruby and orange glasses so that the strength and volume of the light may be regulated by removing or adding as many as necessary. The developer used is pyro, with double the quantity of sodium sulphite called for by the plate-maker's formula, since it is quite important not to have a yellow-stained negative. It is kept in strongly concentrated stock solutions and diluted to half strength in order to bring out all detail with great softness and density. A generous quantity at about 75° F. is flowed rapidly over the plate, extreme care being used to avoid bubbles and streaks which might lead to mistakes in diagnosis. In this strong, warm developer the image comes up very rapidly, showing first the clear, dark high-light around the hand where the rays have had no material to impede their passage; next appears the outline of the bones and the needle, just as you saw them a few minutes previous, and last the fine details of the structure of the bones. Holding the plate up to the light, you see how delicate the gradation is; but more density is required, and the plate is returned to the tray and carried to the point where the whole image shows strongly on the glass-side. Development occupies almost ten minutes, and the plate is then thoroughly rinsed and fixed in the acid chrome-alum bath. The plate comes out beautifully crisp and clean, free from pyro stain and of a good black color.

The wet plate is now sent out to the surgeon and used by him to determine just where to cut for the needle.

In the ordinary course of work, such as locating foreign bodies, ascertaining the position of bones in dislocations, in the diagnosis of fractures, in determining the extent of bone diseases, the presence of calculi and so forth, the plates are washed and dried to be used at leisure. If necessary, a print is made, though much of the fine gradation of the negative is lost. As a general rule, however, prints are made to preserve with the written records. The paper found most useful is a soft-working glossy developing-paper, such as Velox or Cyko. The developer used was the standard metol-hydroquinone.

EDITORIAL

THE ELEMENT OF CHANCE IN PHOTOGRAPHY

IN his eulogy of Mr. A. L. Coburn, one Giles Edgerton makes the following extravagant statement: "Good negatives are very largely a matter of accident. Given the utmost care and wisdom in the selection of subjects and time, it is nevertheless true that the novice may secure with his kodak a more artistic negative than the trained veteran, and that the veteran himself will get the most artistic negatives largely as a result of chance." Whether or not the writer is so blinded by prejudice as to imagine that none except his hero is capable of producing negatives uniformly the result of intelligent, artistic design, his statement ought not to go unchallenged. In the case of the inexperienced enthusiast—with whom it is hit or miss—it occasionally happens that one of his innumerable shots results in a picture full of artistic charm; but then much of the credit belongs to the operator to whom the film is entrusted for development. True, the discovery of a picturesque scene is, to a certain extent, a matter of chance, but only the artist-technician can guarantee a successful negative. A novice, one gifted with artistic instincts, may perceive at a glance the pictorial possibilities of a scene. He takes a snap at it; but unless possessed of the necessary technical knowledge, he may have exposed his film in vain. The element of luck, beyond the good fortune of straying upon a picturesque scene or object, forms no part of the equipment of the expert photographer, unless it be the hope that no accident may mar or impede the consummation of his efforts. Many are the workers whose pictorial triumphs have graced the pages of PHOTO-ERA during the nine years of its existence, and who have studied a scene most critically and with prolonged deliberation, before proceeding to make it their own. If Mr. Edgerton's declaration were true, how does he account for the fact that such accidents happen frequently to such trained veterans as Garo, MacDonald, Strauss, Hollinger, Perscheid, Duehrkoop and others? The charge, which should be vigorously refuted, applies, then, to the large army of unskilled enthusiasts who are satisfied even with the most indifferent of results, and not to the serious worker, who, guided by knowledge and experience, proceeds with systematic discrimination from the selection of his subject — through the various technical operations that accompany the development of the latent image — to the completion of the final result.

OUR FIFTH ANNUAL CONTEST

IN keeping with the policy of PHOTO-ERA, as identified with the highest interests of photographic art, and also in view of the success which attended our last annual photographic competition, the present publisher takes pleasure in announcing another — the fifth annual contest, which is to be conducted along similar lines. A distinct and pleasing feature of this *concours* is the char-

acter of the prizes to be awarded to the successful contestants. The first prizes in Class A and Class B will be of cash; whereas the second, third and fourth prizes in each class will consist of valuable pieces of apparatus, practical and of the latest type. The awards in the fifth grade are also consistently photographic in character. The grand prize, to be awarded for the best collection of prints submitted, will not be a loving-cup, as announced, prematurely, in the August issue of PHOTO-ERA. In deference to the wishes of many eminent pictorialists, whom the editor has consulted, this special award will consist of an object of practical utility, something which will stimulate the legitimate ambition of the photographer to greater possibilities in his chosen line of work, and also have a lasting pecuniary value — a lens, a 5 x 7 Cooke, Series II. It is sincerely to be hoped that the large army of pictorialists, most of whom are subscribers to PHOTO-ERA, will again participate in a contest which gives every indication of proving even more happy in its results than the event of 1905, which, from an artistic viewpoint, alone, was eminently noteworthy. The jury will consist of gentlemen of acknowledged fairness, ability and reputation. Their names will be announced in the next issue of PHOTO-ERA. The rules governing our annual competition will be found among our advertising-pages.

THERE IS ROOM FOR ALL

THERE was received by the editor of PHOTO-ERA, recently, an anonymous letter of a peculiar character. Resorting to exceedingly intemperate language, the writer took us to task for assuming an attitude of silence regarding "the war that is being waged against the Trust." Although we manage to keep tolerably well informed about what is going on in the photographic world, we were not aware of the existence of such a movement in this country. We are in frequent touch with dealers and consumers, throughout the United States, and no complaint of the nature indicated by the anonymous critic has come to our attention. If, as he contends, any considerable percentage of the dealers are dissatisfied with the conditions imposed by this company upon the sale of its goods, why do they not form an organized protest? Why do they permit themselves to be oppressed by a "heartless and sordid monopoly"? There is nothing like good, healthy opposition, if well organized and properly conducted. Why, indeed, do these merchants continue to sell photographic supplies against their will? There have been numerous conventions of photographers, national and state, at none of which this subject, "so vital to the interests of the craft," has been given any serious consideration.

The success and popularity of the goods of the firm in question are due to three causes — the excellence of its products, an able business-policy and judicious advertising — the last involving the expenditure of vast sums of money. It must be borne in mind that the dealer has been saved the expense and trouble of advertising these "objectionable" goods. He has but to make it known that he carries a line of these cameras and films, and business comes to him like magic. But our mysterious correspondent seems to forget that there exist similar lines of

goods of excellent quality made by other firms. These the dealer is at liberty to carry in place of those which, the agitator tells him, are made by the hateful trust and should, therefore, be tabooed. After all that can be said on this matter, it is simply a question of supply and demand. It seems to have a faculty of regulating itself. The so-called "anti-trust" manufacturers are busy and prosperous; i. e., those whose products stand the test of successful application. They have established a steady demand for their products, and this, in many instances, without resorting to the undignified method of abusing their competitors. An inferior article cannot expect to compete successfully with one of superior quality, and no amount of advertising and misrepresentation will ensure its success. When a camera, lens, plate or paper has true and lasting merit and meets the requirements of the practitioner it will sell.

THE COLOR-PHOTOGRAPHY CHIMERA

"COLOR-PHOTOGRAPHY has at last come true!" breezily exclaimed the *Boston Evening Transcript*, recently. The announcement, silly and time-worn, failed to seriously impress an intelligent community, and is fit only to be classed with such myths as the sea-serpent, Jack the Giant-Killer, etc. It is difficult to believe that, in these days of enlightenment, a person of intelligence can be found still clinging to the belief that an object or a scene, as reflected on the ground-glass of a camera, can be photographed *directly* with all its natural coloring.

On the other hand, there are many persons tolerably well informed on many subjects, but not photography, who confuse the three-color printing-process, or even a modification of this process, with the Utopian dream — photography in natural colors. Foremost among the experimenters in this highly important branch of photography are A. and L. Lumière, who demonstrated their well-known starch-process during the middle of last June on the occasion of a visit to Paris by the King and Queen of Denmark. The results, though interesting, were only partially successful, the Lumière Brothers themselves declaring that *dans la pratique les résultats sont peu satisfaisants*. Elsewhere in this issue will be found a résumé of Lumière's simplified method of photographing in colors.

AN OBSERVANT JOURNALIST

THE sapient editor of *The Amateur Photographer*, Mr. A. Horsley Hinton, is not slow; he is only prejudiced. In a recent issue of his excellent journal he announces an important discovery and straightway accords his readers the full benefit thereof. He advises that, in order to facilitate the opening of a roll of photographic prints, manuscript or music, sent by post, a piece of cotton thread be glued inside of the wrapper, with one end slightly protruding. The recipient simply grasps the loose end of the string, pulls it back to the full extent of the wrapper and, presto, the package is undone! We are glad that at last the English photographer is enabled to enjoy so useful and practical

an improvement. Unfortunately for our cultured cotemporary the idea lacks the virtue of novelty. It is quite old and, what must be particularly galling to him, the expedient is of American origin. No, not English, nor even French, but AMERICAN. The device was patented in 1857, and applied equally to envelopes and wrappers. A prominent American express company has used the contrivance for many years on its return C. O. D. cash envelopes, and numerous mercantile firms, throughout the country, have made use of it since 1860.

Whether or not Mr. Hinton noticed this thread-device during his memorable visit to this country in 1904, only he can tell. It seems certain, however — and one needs but to refer to his editorial notice — that our keen and broad-minded cotemporary has discovered something that has been in use fifty years.

RIVAL PHOTOGRAPHIC INDUSTRIES OF EUROPE

THAT Germany is still preëminent in the manufacture of photographic lenses and, to a large extent, of photographic papers, so far as this subject affects Great Britain, is not a source of wonder. It was not enough that in optics that country, excelling in the thoroughness of its scientific research, should dominate the photographic domain by its Voigtlaender, Steinheil, Goerz and Zeiss, but it has always supplied the world with the best grades of albumen paper and, in Europe at least, ranks first in the production of silver papers. With the development of the wonderful optical glass at Jena the lens-industry took a tremendous leap forward, so that the leading opticians in England, France and the United States, under special arrangement, are constructing well-known types of lenses and field-glasses originating in German optical works.

According to the *British Journal of Photography*, the superlative excellence of the German photographic products, as well as the tremendous commercial activity and energy of their manufacturers, are the cause of universal wonder. One begins to understand why it is that certain English cotemporaries are loath to credit the workers in the Kaiser's dominions with their manifest successes in the realm of photography — scientific, industrial and artistic. The *British Journal* appears to be worried about the future of its country's photographic industries, and cites some interesting figures, which, though not exact, afford food for serious reflection. According to these, England imported, during the first three months of the present year, about $764,000 worth of photographic apparatus and materials from Germany, exporting goods only to the paltry value of $32,000. Of this small amount $23,000 represented apparatus, while the imports of German apparatus amounted to no less than $255,000. This figure, apparently, does not include lenses. England's largest imports were sensitive paper ($280,000), while it seems that Germany imported none of English manufacture. Germany, however, took $8,624 worth of dry-plates from the English, who felt not the necessity to reciprocate. Not a word is vouchsafed by our cotemporary about photographic chemicals, one of the foremost of German industries; neither does he allude to an another item of importance — FILMS. Is it possible that, as a patriotic Englishman, he — but perish the thought!

THE ROUND ROBIN GUILD

Conducted by ELIZABETH FLINT WADE

A department especially designed for the amateur photographer and the beginner, in which information, advice and criticism will be freely given. Membership may be obtained by sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston, Mass.

"Who doth not love the soft September days
When summer lingers lovingly, and fain
Would say farewell? But with her train
Of winged subjects, in the golden haze
She vanishes so silently, we raise
No cry of anguish, for no parting pain
Disturbs our bliss — our loss we count but gain.
Yet e'en while dear September's name we praise,

The swallow tempts his wings to longer flight;
The grasses fade; the brown leaf flutters down;
Full ripe the thistle-tops and milkweed blows
Sail far aloft on airy pinions light,
And haste to catch at fleeting Summer's gown.
Stay! Hath she gone? The faint wind sighs, Who knows?"

Alas, young Spring has gone and so has Summer glad! A gray mist lies at morn and eve along the vale, the winged seeds fly hither and thither seeking a snug harbor, the crimson hip flames on the rosebush, and the trees are decking themselves for the autumn festival.

LARGE NEGATIVES FROM SMALL NEGATIVES

In a recent number of PHOTO-ERA full directions were given for constructing at small expense an apparatus by which one could make enlargements as successfully as with the expensive enlarging-camera. By a sort of double process one may make enlarged negatives with this same apparatus from which any number of contact-prints may be made, using any kind of paper. The negative must be one free from scratches or pin-holes and full of detail. From this negative make, by printing in the same way as for lantern-slides, a positive, using a slow sensitive plate. The glass positive must not be too dense, a rather soft negative giving the most satisfactory results.

Adjust this negative in the improvised light-tight box in the same way as suggested in the article referred to, and on a bromide paper of as thin texture as can be procured make an enlargement, the size preferably not being over 8 x 10.

When this print is developed and dried it is made translucent by first oiling well with white vaseline and then waxing. Have a sheet of clean blotting-paper somewhat larger than the print, lay the print face down and rub it over with the white vaseline, using a plentiful supply and letting the print lie over night. In the morning remove all surplus of vaseline with a soft cloth. The waxing-preparation is made by dissolving one ounce of pure white beeswax in four ounces of benzole. When thoroughly dissolved add four ounces each of ether and pure alcohol. Put a little of this in the center of the print and spread it quickly over the paper with a wad of surgeon's cotton or a soft flannel. The print is rubbed softly and evenly until all traces of vaseline have disappeared and the paper is almost transparent. If there are any defects in the negative they can easily be touched out with a very soft pencil.

This paper negative gives as fine prints as a glass negative, especially if during the process of printing the frame is covered with a mask of onion-skin paper.

By this process — which is really more simple than it sounds in the telling — one may obtain a stock of large negatives from his favorite small negatives, and negatives which require small space to store and are unbreakable.

INTENSIFYING WITH URANIUM

Uranium is becoming an important factor in photographic work. It is used in the intensifying of negatives with most satisfactory results. The solution for immediate use is made up with water, five ounces; acetic acid (glacial), one-fourth ounce; nitrate of uranium, fifty grains; ferricyanide of potassium, fifty grains.

If made up in two solutions the liquids can be mixed when needed. The two-solution formula is as follows:

No. 1

Water	8 ounces
Glacial acetic acid	2 drams
Nitrate of uranium	80 grains

No. 2

Water	8 ounces
Glacial acetic acid	1 dram
Ferricyanide of potassium	100 grains

To use, mix equal parts of both solutions.

The plate is washed well to free it from hypo, then immersed in the intensifier. The action of the intensifier is to turn the image first a warm black, then to a brown, until finally it passes through the gradations of color and assumes a tone resembling red sienna. The negative must be examined often during the process, as it is liable to become too dense. After it is judged to have reached the proper density — which can be determined by looking through the negative toward the light — the plate is washed for a few minutes in a diluted solution of acetic acid in the proportion of one dram of the acid to a pint of water.

DR. ALBERT R. BENEDICT
FIRST PRIZE — NOCTURNAL PHOTOGRAPHY

J. A. MURDOCH — SECOND PRIZE — NOCTURNAL PHOTOGRAPHY

Should the intensification have been carried too far, it can be removed by placing in a tray of water to which a few drops of ammonia have been added.

The color of the negative after uranium intensification makes a great improvement in the printing of the picture. The brownish-red tones of the film seem to be a specially good medium to govern the action of the light on the paper.

Uranium intensification is one of the simplest methods of strengthening the printing-qualities of a negative.

TRANSFERRING FILMS

WHEN one is so unfortunate as to break a negative the film can be easily transferred to a whole glass, provided the film itself has not been torn through.

The broken negative is first laid glass side down on a plain piece of glass corresponding in size, and held in place by means of melted wax. To do this effectually first warm the plain glass, drop a bit of wax on each corner, then lay the broken negative on the glass and let it stand till it sets.

Make up a solution of alcohol, four ounces; water, two ounces; and hydrofluoric acid, thirty drops. Place the negative with its glass support in a rubber tray and flow it with this solution, rocking it gently to and fro as in developing. When the surface is thoroughly wet let it remain for a few minutes until the film begins to loosen from the glass. This can be told by trying it at the edges with a toothpick. Have another tray ready with alcohol and water in it, using twice as much alcohol as water. In the bottom of this tray put a clean glass the size of the broken negative.

As soon as the film is well-loosened begin at one edge and push it gently from the plate, rolling it together as it becomes detached from the glass. Slip a piece of glass under the film and transfer it to the tray of alcohol and water, and with the toothpick gently unroll the film and let it sink to the plate that lies at the bottom of the tray.

When it is in place on the plate lift it from the tray, drain well, expel all bubbles that may have formed between glass and film and set it in a place free from dust.

The operation of removing the film and transferring it to a whole glass does not take over fifteen minutes and is a simple and easy matter even for the inexperienced amateur.

Monthly Competitions

Closing the last day of every month.

Address all prints for competition to PHOTO-ERA. *The Round Robin Guild Competition, 383 Boylston Street, Boston, Mass.*

PRIZES

First prize: Value $10.00.
Second prize: Value $5.00.
Third prize: Value $2.50.

Honorable Mention: In addition to the awards, the names of those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be published.

Prizes may be chosen by the winner, and will be awarded in books, magazines, enlargements, mounts, photographic materials or any article of a photographic or art nature which can be bought for the amount of the prize won.

RULES

1. These competitions are free and open to all photographers, whether or not subscribers to PHOTO-ERA.

2. As many prints as desired, in any medium, mounted or unmounted, may be entered, but they must represent the unaided work of the competitor.

3. The right is reserved to withhold from the competitions all prints not up to the PHOTO-ERA standard.

4. *A package of prints will not be considered eligible unless accompanied by return postage at the rate of one cent for each two ounces or fraction.*

5. *Each print entered must bear the maker's name, address, Guild number, the title of the picture and the name of the competition for which it is intended, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing-process.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA. If suitable, they will be reproduced, full credit in each case being given to the maker.

SUBJECTS FOR COMPETITION

August — "Waterscapes." Closes September 30.
September — "Sunsets." Closes October 31.
October — "Windows and Doorways." Closes November 30.
November — "Genre Studies." Closes December 31.
December — "Home Portraiture." Closes January 31.

AWARDS — NOCTURNAL PHOTOGRAPHY

First prize: Dr. Albert R. Benedict.
Second prize: J. A. Murdoch.
Third prize: D. H. Brookins.
Honorable Mention: Wm. S. Adams, M. A. Yauch, John Dove, F. W. Greenman, Peter Clausen, Mrs. Loudovica Butler.

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

C. R. H.— Your negative is very much underdeveloped. It seems to have detail which may be brought out by intensifying. Try the uranium intensifier, the formula for which is given in this number. If not successful the negative can be restored to its first quality and the trial repeated.

BERTHA B.— Your trouble is metol poisoning. It is only local and may be cured easily. Any physician will give you a formula for an ointment which will quickly remove the trouble. After being once poisoned by metol the same thing is likely to occur again, and it is wise to use rubber finger-tips when developing with this chemical.

RUTH S.— Stand-development means standing plates on edge in a tank fitted with grooves to keep the plate upright, filling the tank with weak or much diluted developer and letting the plates stand in the solution till they are developed. Plates may be left in a weak developer all night without danger of over-development.

GEORGE DEANE.— Adurol is a developing-agent derived from quinol. It comes in two forms, one being called Adurol Schering and the other Adurol Hauff. It has much more active qualities than quinol, the image coming out in about twenty seconds and development being complete in about four minutes. Adurol produces a very soft-printing negative.

O. J. PENNY.— It is not necessary to back your plates, and unless great care is taken in the process the plates are apt to be marred or scratched. Why not use non-halation plates for interiors where windows are included in the angle of view? The exposure for non-halation plates must be twice as long as that for the ordinary plate.

REGINALD C.— You can have a telephoto attachment for your lens and you will find it a great help in making nature studies. One does not need to go so near the object to be photographed, and in the case of timid birds and wild animals this is a great advantage. The prints which you enclose are very interesting, especially the one of the heron.

F. D. S.— You can get samples of cover-paper by addressing any manufacturer of papers. The Mitteneague Paper Co. carries a fine line of cover-papers specially adapted for use as photographic mounts. Use plenty of paper, and do not place the print in the center of the mount. Paste at the corners or just across the top edge. A platinum print will lie flat on the mount, and no print looks well pasted down flat on a mount.

D. H. BROOKINS — THIRD PRIZE — NOCTURNAL PHOTOGRAPHY

Print Criticism

Address all prints for criticism, enclosing return postage at the rate of one cent for each two ounces or fraction thereof, to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing process.*

C. C. — Your landscape is a well-taken picture and very artistic in treatment. The color-values and lights and shadows are well rendered. The print would gain by having about an inch trimmed off from the left side.

D. L. H. — The portrait submitted is too flat, showing that the lighting has not been well managed. Then the hands are as strongly lighted as the face, making an unpleasant spot of light where shadow would be better. The hands should be kept more or less in shadow, especially when they are lying in the lap, as in the case of this picture. Try the same pose, which is very good, and instead of so strong a light on the face subdue it and screen the hands so that they are low in tone. The bow in the hair is inartistic.

S. M. R. — This picture landscape is an example of what a landscape picture should not be. It is divided in the center horizontally by the sky line and perpendicularly by a tree. Cut the print off at the right-hand side to within half an inch of the tree-trunk; cut off an inch from the foreground; and you will have a picture which, while possessing no real artistic value, will still be pleasing to look upon. If you will look in recent numbers of PHOTO-ERA you will find many valuable rules on composition of pictures, and hints as to what to include and exclude.

T. L. — The only fault to find with this print, which is a picture of a child reading a book, is in the child's dress. It is too evidently dressed for the occasion, and imparts the importance of clothes to its attitude. The subject is well chosen, the surroundings simple, the lines are well arranged, and if the child was dressed in a simple every-day frock the effect would be very pleasing. The starched and stiffened garments make harsh and unpleasant lights. The white bow in the hair should be changed to a soft red or tan, something that will give good color-values, not absorb all the light and appear as a white splash.

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

Conducted by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department Address all such communications to Phil M. Riley, 383 Boylston Street, Boston, Mass.

HOW TO FIND THE FACTOR FOR YOUR FAVORITE DEVELOPER

ALMOST every photographer has a developing-formula which he likes especially, and for which there is often no published factor. For those workers who wish to employ factorial development, Alfred Watkins, in his excellent manual, gives the following methods of finding the factor for any special developer.

Of combination developers Mr. Watkins says:

"The factor is, approximately, the average of the two constituents, if in equal parts. Thus, with hydroquinone (5) and metol (30) the average would be 7½. But if the combined developer contains two parts of hydroquinone to one part of metol (three parts in all), you put down the factor for each of the three parts and divide by three, thus:

$$\frac{5+5+30}{3}=13\tfrac{1}{3}$$

"But a combination developer containing pyro does not conform to this rule, and its factor must be ascertained by actual trial.

WHAT ALTERS THE FACTOR

"With pyro (as with amidol), the factor varies with the strength in grains to the ounce. But in all other developers, as far as I know, the factor does not alter with strength or dilution.

"The use of bromide (or its omission) alters the factor greatly with pyro, and, probably, with short-factor developers, such as hydroquinone. With high-factor developers, such as metol, I cannot find it has much effect.

"Variations in the amount of alkali in the developer do not alter the factor.

"As a general rule, the factor which is right for one plate or film is also right for another plate or film. It is true, that some plates develop much more quickly than others, but the time of appearance makes allowance for this. I have often, after testing six different makes of plates for their speed, exposed them in accordance with their speed, and then developed them with the same factor. In almost all cases I secured six negatives which were practically identical, although some have (in accordance with time of appearance) had to be developed longer than others. A double emulsion, as in the Cristoid film, seems to call for a much higher factor than a single one.

"In order that inquirers shall be able to work out the grains to ounce of their particular fad (and not expect an overdone experimenter to do their sums for them), I give the rule to follow: Take the total quantity of water in No. 1 or A solution, add to this the relative proportion of No. 2 or water which is required to make the complete developer, and then divide this quantity of liquid into the full amount of pyro given for the No. 1 or A solution. The result is the grains of pyro to ounce of developer."

Mr. Watkins suggests the following trial factors for various developers:

Adurol, 5; amidol (two grains per ounce), 18; diogen, 12; edinol, 20; Eikonogen, 9; Glycin (carb. soda, 8) (carb. pot. 12); hydroquinone, 5; imogen sulphite, 6; kachin, 10; metal, 30; pyrocatechin, 10; ortol, 10; rodinal, 40.

1 gr. pyro-soda, no bromide	grains per ounce	18
2 " " " " "		12
3 " " " " "		10
4 " " " " "		8
1 " " " ¼ gr. bromide	solution	9
2 " " " ½ " "		5
4 " " " 1 " "		4

FOCAL LENGTHS

THE habit of using short-focus lenses infected the entire photographic world simultaneously with the habit of using hand-cameras and the modern anastigmat. A very bad habit it is, too, although there is absolutely no harm in such a lens when used rightly. A short-focus lens embraces an angle of view which it is impossible for the eye to comprehend, and the picture is not, therefore, true to nature as one sees it. This is because the eye is a long-focus, narrow-angle instrument and is still further hampered by the selective human brain which interests itself in but one thing at a time. Now, pictorial photographers usually prefer long-focus lenses to short-focus lenses because they tell the truth, while the latter tell so much more that it becomes merely another way of telling a lie. Whatever technicians may say to the contrary, realism — the truth — is the aim of the genuine pictorial photographer, even though he may call it impressionism; but it is realism to a human impression of the scene, not to a lens impression. Let the focal length be long.

A SUGGESTION FOR COPYING PRINTS

F. E. COOMBS, of Natick, Mass., offers the following practical suggestion for avoiding grain when copying paper prints or drawings:

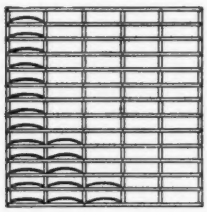
Work at night, or in a darkened room. Use two strong lamps (any kind of illuminant) of approximately equal candle-power and actinism. Arrange the lamps in front and at each side of the sheet to be copied. Hold a pencil upright and about an inch away from the drawing, and move the lamps into such a position that the two shadows of the pencil shall be as nearly as

possible of same shade. If one flame is an inch higher than the other, there will be no grain visible, with a proper exposure, even on the roughest paper.

DRYING PICTURE POST-CARDS

HERE are two methods:

1. Make a rack, of wood and wire, as suggested by diagram, the width between the uprights being slightly less than the width of a standard post-card. In inserting the cards, curve them with the film surface upward and convex, then, when quite dry, they will easily pack down flat.



2. A method used by some very large producers of post-cards. Have a roll of dry, fluffless linen or cotton cloth, with two rods, rolling it off one and on to the other. After washing, surface-dry the cards by dabbing them with a pad of dry

cloth, and lay them face downward, side by side, on the cloth of the roll. When a few feet are covered, roll the cloth on to the receiving-rod, then unroll another length on the table. The rolls curve the cards the right way, and, if the cloth is thick and *quite dry* before using, this is the best method of drying a great number of cards in little space. Obviously, certain surfaces are unsuitable for this treatment.— *The Photographic Monthly, London.*

THE WASHING OF PRINTS

IT is perfectly immaterial whether a print-out or a development paper be adopted; one, if not the most important, operation, if permanency is required, is a thorough washing after fixation. Naturally, one assumes that the fixation has been complete; for if this is not so, then there is very little hope of obtaining permanent prints. The fixing-bath must not be used too long, it should not be too cold, and should have free access to every print, and the latter should remain in a sufficient time. It may be accepted as an axiom that, given a properly prepared fixing-bath, alkaline for print-out and acid for development papers, and the prints are kept well below the surface, there is not the slightest danger of reduction.

Besides this, there is also the fact that a properly fixed print is much more readily washed free from the traces of hypo than an imperfectly fixed one. In the latter case it is impossible, in fact, to completely eliminate all the hyposulphites except by chemical means.

The usual plan of washing prints or post-cards, for the latter may also be considered here, is merely to put them into a vessel with a constant stream of water flowing in and out. Unless this supply of water is so arranged as to keep the prints thoroughly on the move, there is very great danger of their collecting at the bottom of the tank or dish in a solid mass, and there is practically no change of water. If the prints are kept on the move there is always danger of the tender surfaces being damaged by friction against one another or the sides of the vessel.

There is another point which, whilst it may not be of much importance in some cases, most decidedly is a factor to be reckoned with when the water-supply is limited or it is supplied by meter.

This method of washing is extremely slow in removing the hypo, and this can be very easily seen by placing in the tank or dish some deep-colored aniline-dye solution, and allowing the water to run in and out in the usual way. It is astonishing what a long time it takes for the last traces of color to disappear.

A much more effective plan, which is also extremely economical of water, is the following: As soon as the prints come from the fixing-bath throw them into a dish of water, running, if you like, for five minutes, then take them out and place one on top of the other in heaps of about twelve and squeegee vigorously with a roller squeegee, then put them back into water, separating them well and allowing about a pint and a half of water for every square foot of print. Keep the prints gently on the move — turning them over two or three times will be sufficient — then remove again after five minutes' soaking and again squeegee and repeat the operation. Naturally, the dish should be well washed out between the soakings.

If this plan is adopted, about six changes of water with intermediate treatment will be quite enough to remove all traces of hypo. In the case of post-cards a longer treatment is advisable on account of their thickness.

For commercial work on a large scale it is advisable, in the case of print-out post-cards, to use the chrome alum and bisulphite combined bath, which tones very evenly and so hardens the print that they will stand warm water. Then the temperature of the water may be raised, and provided one does not exceed about 110°Fahr. there is little danger of trouble from the softening of the card, and the hyposulphites are much more rapidly removed.— *Photo-Notes and the Bromide Monthly, London.*

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

PHOTO-ERA NOT SOLD

How strange that some persons seem to know more about other people's business than their own. Here 's a photographic journal busying itself with the affairs of PHOTO-ERA, and boldly asserting that this publication has been acquired by the proprietors of the *American Amateur Photographer and Dark Room*, adding that it has the news on "good authority." The statement is thoroughly untrue. It is passing strange that the publisher of this sensational statement did not consult the proprietor of PHOTO-ERA, the best authority in such a matter, before printing his "exclusive;" but he did not stop for such a trifle.

THE JURY OF PHOTO-ERA'S FIFTH ANNUAL PHOTOGRAPHIC CONTEST

IN order to assure the subscribers intending to participate in our Fifth Annual Prize Competition of the absolute fairness with which the prints will be judged and prizes awarded, the publisher of PHOTO-ERA will appoint a jury which cannot fail to meet general approval. The members of this jury will comprise an American artist, William L. Taylor, himself a practical photographer; Arthur Fairbanks, director of the Museum of Fine Arts; a professional art-critic, William Howe Downes, of the *Boston Transcript;* a professional photographer, Rudolf Eickemeyer, of New York; an amateur photographer, F. Benedict Herzog, of New York; and Wilfred A. French, publisher and editor of PHOTO-ERA.

THE GRAND PRIZE

Photo-Era's Fifth Annual Photographic Contest

THE NATIONAL CONVENTION

THE great national event among the professional workers, the annual convention of the Photographers' Association of America, took place at Dayton, O., August 6–9, at the very time we went to press with the September issue. That it proved to be an emphatic and brilliant success was a foregone conclusion. We hope to have a report of this eminent occasion in the October issue of this magazine, which should appear promptly September 20.

ADDENDA TO ARTICLES BY JAMES THOMSON

IN connection with the article "A New Printing-Paper," in the June issue, Mr. Thomson advises us, in the interest of better results, that while the common and easily-obtained brown-scale ammonia iron citrate will serve well enough, the green variety in the sensitizer will be an improvement. The sediment present in the solution where the brown salt is employed makes the elimination of traces of it difficult where the texture of the paper is at all porous. Even prolonged washing sometimes will not wholly free from a slight yellowness in the whites. The use of the ammonia citrate of iron (green scales) furnishes a perfectly clear liquid and there follows through its use in formulæ not the slightest trace of stain. Beautiful gradations in the half-tones and pure whites are easily obtainable.

We also note two typographical errors in the article "Mirror Reflecting Cameras Antique and Modern," by Mr. Thomson, which appeared in the July issue. "Laymen" at the top of page 28 should be "women," and at the close of the same paragraph "missing of the hair" should read "mussing of the hair."

PICTORIAL SUBJECTS IN PROFUSION

CAMERISTS intending to pass the summer or autumn in a locality abounding in beautiful scenery can do no better than to procure a copy of the illustrated booklet, "The White Mountains of New Hampshire." This far-famed region is known as "the Photographer's Paradise," a title it fully deserves. The editor of PHOTO-ERA has photographed very extensively among the mountains of New Hampshire during the past twenty-five years, and so have thousands of others. A request, accompanied by a two-cent stamp, sent to C. M. Burt, general passenger agent, Boston & Maine Railroad, Boston, Mass., will secure a copy of the above-named booklet.

GOERZ COLOR LENS NO. 200,000

THE C. P. Goerz American Optical Company is very anxious to regain possession, if possible, of No. 2 Color Lens, numbered 200,000,

which was recently sold, at auction, by the receiver of R. J. Golsen, of Chicago. The Company will be glad to give the owner a similar lens, or make any satisfactory arrangement with him in order to secure this particular lens, which, obviously, has an historical value. It is to be added to the collection of lenses at the Berlin office, where, nestling among medals and trophies, repose No. 1, No. 1,000 and No. 100,000.

THE PORTLAND, MAINE, CAMERA CLUB

THE Portland Camera Club of Maine, whose extremely interesting annual exhibition was reviewed in the June issue of PHOTO-ERA, ranks high among the regular photographic bodies of this country. Pictures by S. S. Skolfield, J. R. Peterson, H. A. Roberts, G. E. Fogg and E. E. Cheney grace the pages of the current issue of this magazine. Of these, "Late Afternoon, Winter," by Fogg; "Winter," and "The Wave" by Peterson, were shown in the Third American Salon, the last-named picture having been chosen by the editor for the insert in the present issue of PHOTO-ERA.

A UNIQUE ARTICLE ON COLORING PHOTOGRAPHS

A NOVELTY featuring one of the winter issues of PHOTO-ERA will be a series of original articles on how to color photographs artistically, from the pen of an expert colorist of reputation — Bertha I. Barrett, of Boston. This artist will describe in a lucid and practical manner her own method of coloring photographic prints, using W. & N. water-colors. In order that our readers may profit directly from the valuable advice imparted on this subject, Miss Barrett will indicate how to color certain familiar subjects, copies of which may be procured of the makers at a nominal price. These subjects have appeared in the pages of PHOTO-ERA and are as follows: Landscape — "In the Hills of Bordighera," by G. R. Ballance, St. Moritz-Dorf, Switzerland, platinum print, price, 1.25 francs, postage extra; Marine — "The Replica of the Painted Ship," by William Findlay, Fraserburgh, Scotland, matt silver print, price, one shilling, postage extra; Snow-scenes — "Snow Shadows," by John Chislett, Crown Hill, Indianapolis, Ind., and "Winter in the Woods," by C. W. Christiansen, Chicago Camera Club, Chicago, Ill. The above-named subjects, selected by Miss Barrett for her purpose, appeared respectively in the following issues of PHOTO-ERA: June, May, April and March — all of 1907. We have not yet ascertained whether Mr. Chislett and Mr. Christiansen will consent to supply copies for the purpose stated; but if assured that no improper use will be made of the prints after they shall have been colored, these gentlemen, no doubt, will yield — for the cause of art.

Miss Barrett has studied art in Europe and has copied extensively in the continental picture-galleries. Her work is highly praised by competent critics, and her articles for PHOTO-ERA will be anticipated with keen pleasure.

PHOTOGRAPHERS' ASSOCIATION OF CANADA

THE annual convention of the largest photographic body north of the United States was held July 24 and 25, in Victoria Hall, at Toronto, Canada. A distinguishing feature of this meeting was a desire to accomplish something for the material benefit of the craft. It was, therefore, unanimously resolved to petition the Dominion Parliament to relieve the photographer of superfluous and disfiguring copyright marks on photographs and, at the same time, to reduce the amount of the fee from $1.00 to $0.50. Mr. W. S. Lively, of McMinnville, Tenn., delivered an address, speaking on the importance of photographic associations — State and National. Mr. F. L. Cornell gave an instructive talk on "Retouching," and Mr. R. Lawrence, of Rochester, spoke on "Lenses." Entertainments were furnished at the expense of dealers and manufacturers — J. G. Ramsey & Co., H. C. Tugwell & Co., W. A. Lyon & Co., Lockhart Photo-Supply Co., Canadian Kodak Co., and Defender Photo-Supply Co. The announcement that Mr. Joseph Di Nunzio had donated a sterling silver shield as a prize for the best display of prints on Angelo paper — to be competed for next year — was received with applause.

The attendance was excellent and the display of pictures very fine. It is gratifying to record that everything was accomplished as planned. All the present officers were reëlected. They are as follows: A. M. Cuningham, Hamilton, president; J. Frank Jackson, Barrie, first vice-president; John Kennedy, Toronto, second vice-president; Frederick Roy, Peterboro, third vice-president; E. Poole, St. Catharine's, secretary; Charles L. Rosevear, Toronto, treasurer.

THE THREE-COLOR PRINTING-PROCESS

EVERY year, with the regularity and persistency of the sea-serpent myth, comes the report of the discovery of color-photography. This year the story emanates from Paris, the wonderful invention being accredited to A. and L. Lumière, the clever chemists of Lyons, France. After carefully investigating the very elaborate though not official account of the affair in a French illustrated weekly paper, we found that it referred to the well-known starch process of the Lumières, a full account of which was printed in the photographic journals last February. The sensational press of this country wisely refrained from mentioning the subject, while the dignified portion of the daily press, after obtaining up-to-date information regarding the three-color printing-process and scrutinizing the claims of the enthusiastic champions of the Lumière Brothers, were prudently conservative in their views. To scribes like these, "modest doubt is the beacon of the wise."

Nevertheless, the Lumières actually have a

plan of printing photographically a tri-color positive print or transparency from one plate, instead of three. These brilliant experimenters got up the starch-process and their latter process is a modification of this. It consists briefly of mixing minute colored particles of a uniform size of potato starch, some red, some blue, others yellow, in a gelatine bichromated film, which is hard, spread on a glass plate. The sensitive emulsion is coated over this and exposure is made with the glass side towards the object, in the camera. The colored starch particles act as a color-screen, and from the negative positive prints are made on another colored plate in the same way. Lumière's agent was in New York several months ago and is said to have shown some very fine specimens of the Lumière prints. The high reputation of these two photo-scientists justifies the belief that their recent improvement of the tri-color process is a *fait accompli*, although it may be reasonably supposed that, like the process at present in use, results absolutely true to nature will be the exception and not the rule. Up to the present time color-prints, while in some instances extremely realistic, leave much to be desired in respect to chromatic truthfulness.

What has long been wanted is a method which shall be less elaborate than the present three-color system, admit of making an unlimited number of copies, if desired, and present the tints of the original object with absolute fidelity.

PHOTOGRAPHIC CONTEST AT THE TAUNTON FAIR

A PHOTOGRAPHIC prize competition, open to all amateur workers, will be again a feature of the Bristol County Fair, to be held at Taunton, Mass., Sept. 17, 18, 19 and 20, 1907. The exhibition will be under the personal charge of John Truex, as in previous years. There are no limitations as to number and size of prints, which must be mounted, but need not be framed. All data must be on the back of pictures. All work on negatives and prints to be by the exhibitor. The cash premiums range from $1.00 to $7.00, each, distributed as follows: $1.00 to $4.00 for portraits; $1.00 to $4.00 to genre, landscape, marine and still-life divisions; and $1.00 to $7.00 for collections of not less than six prints. Entries, on or before September 14, to Carleton F. Sanford, Taunton, Mass.

The editor of PHOTO-ERA is reliably informed that this contest will be conducted in a highly creditable manner, and suggests that amateurs throughout New England, especially, make an effort to send prints, assuring them that same will be returned on the closing day of the fair.

THE CAMERA USED IN PHOTOGRAPHING MARS

Now that the canals of Mars have been successfully photographed — the feat being due to the enterprise and liberality of Professor Percival Lowell of the Massachusetts Institute of Technology and the acknowledged authority on the topography of Mars — it may be interesting to know something about the camera used on this eventful occasion, which took place early in July last, in the Peruvian Andes. This camera, designed for Professor Lowell, was constructed by William Gaertner, of Chicago, maker of scientific instruments. Mr. Gaertner's camera is in the general form of a four-foot brass tube, one end fitted to be clamped to the end of an eighteen-inch telescope, and the other containing a shutter and plate-holder. The main tube is in two parts, the one telescoped into the other and adjusted with a device for slow focusing.

The unusual features of the apparatus are a peculiar arrangement of the plate-holder, by which a large number of exposures may be taken on one plate, and a concave lens, which enlarges the image on the plate instead of diminishing it, as do the lenses of the ordinary camera. By pressing a pneumatic bulb the operator may move the plate so that as many as fifty exposures may be taken, each exposure showing a different phase of the planet. On account of the difficulty of following the planet's motion accurately, however, the exposures could not be longer than ten or twelve seconds. Each image on the negative is about one-eighth of an inch in diameter.

Without referring to the question whether or not the canals of Mars are proof positive of the existence of human life on the fiery planet, it is at least a source of satisfaction to know that the markings, so carefully observed and drawn by Professor Lowell, are absolute realities — proved by photography — and are not due to visual suggestion, as has been insinuated by jealous, narrow-minded investigators.

AMERICAN FEDERATION OF PHOTOGRAPHIC SOCIETIES

THE most important recent event was the belated display in Wilkinsburg of the Third American Photographic Salon, July 13 to 23 inclusive. Owing to the impossibility of securing a suitable exhibition-hall at that season of the year the collection was hung in the studio of R. L. Sleeth, Jr., 1120 Wood Street, where it was seen to excellent advantage, despite the fact that the attendance throughout taxed the capacity of the premises. The full number of 275 pictures, representing fifteen countries, was shown and the interest created was profound, the strong artistic character of the pictures being heartily enjoyed. The exhibition was held under the auspices of the Pen, Pencil and Camera Club, greatly increasing the prestige of that organization.

The prospects for the Fourth American Salon are extremely bright. Entries from abroad had already begun to arrive in July. The opening exhibition will be held in Pittsburg during the first two weeks in November, this year. Several Eastern cities have been negotiating with the Federation for admission, and privilege to exhibit in the next Salon. If arrangements to that effect are consummated, the limit of the itinerary will have been reached and a waiting-list is in sight.

WITH THE TRADE

A NEW DEPARTURE

THE Mirmont Photo-Paper Co., of Glendale, Brooklyn, is making a unique and interesting experiment in marketing its well-known "New York" papers. It has secured a lease of the ground-floor store at 18 East 23d St., New York, where it will carry a $15,000 stock of photographic papers for the convenience of its patrons in Greater New York. To the best of our knowledge this will be the only retail store in the world devoted only to the sale of photographic papers.

The store will be under the management of Secretary O. H. Hart, assisted by a force of experts including Sam Oswald, George Barrows and Bill Nye, who will demonstrate the papers in the studio trade as well as at headquarters. We understand that before the end of the year the Mirmont Photo-Paper Company will open similar stores in Chicago, Philadelphia and St. Louis. To meet the increasing demand for its goods, the Company has started to duplicate its entire factory outfit. This was begun on June 18, just one year after we had announced in these columns that it would rebuild its plant which had just been completed only to be destroyed by the San Francisco disaster — truly a double-headed Phœnix.

BAUSCH AND LOMB'S NEW LENS-CATALOG

THE revised catalog of photographic lenses made by the Bausch and Lomb Optical Company, of Rochester, N. Y., has come to hand. It attracts the eye by its superb appearance, the paper, printing and illustrations being of the highest possible excellence. What interests our readers chiefly, however, is the information given about lenses, and here none will be disappointed. A brief reference to the Company's history in lens-making is followed by a chapter devoted to up-to-date information, practical and authoritative, concerning photographic lenses. Then follows a list of the Zeiss lenses, which, as the result of a special arrangement with the Carl Zeiss Optical Works of Jena, are constructed by the Bausch & Lomb Company, at Rochester. These American-made Zeiss lenses are in every respect, scientific as well as technical, the equal of those made in Germany; for they follow the same formulæ, consist of the same grade of Jena glass, and are as critically tested during and after construction. The types listed are the well-known Tessars, two series, f-4.5 and f-6.3; the Zeiss Extreme Wide Angles, f-18; the Zeiss Protars, series VII, f-12.5, being medium wide angle, yet speedy; Protars, series VIIa, f-6.3 — the famous convertible type. A page is given up to sets fitted with the Volute Shutter. The popular Plastigmat lens, Bausch & Lomb's own symmetrical doublet and lower in price than the Zeiss lenses, fills another page; likewise the Company's Extra Rapid Universals, and its high-power Telephoto lens. The Bausch & Lomb Ray Filters are also shown, together with illustrations of their efficiency, the Volute Shutters concluding the very interesting and valuable price-list, a copy of which should be in the possession of every photographer.

REFLECTING-CAMERAS

IN buying cameras of the reflecting type, it pays to get a good one, and the best is none too good for the serious worker. Thus such eminent pictorialists as Alfred Stieglitz, Eduard Steichen, Alvin Coburn, Silsby Sisters, Mrs. W. W. Pearce and many others are using the Graflex Cameras under the skylight as well as in the open. The millionaire class of amateurs is also quick to appreciate a good thing; hence the Graflex Cameras are used by a large number of wealthy men, including George Gould, W. K. Vanderbilt, A. C. Bostwick, George D. Pratt, H. D. Rogers, August Belmont, R. H. Stillman and Spencer Trask. The reason is that these cameras of Folmer & Schwing are made from the very best materials obtainable and the workmanship is of the utmost superiority. The mirrors are ground from Jena glass with both planes optically true. The slightest warping of these mirrors would cause them to be rejected. The silvering is very carefully done and inspected, the slightest blemish noticeable in the mirror making it necessary to strip and resilver it. This critical inspection is carried through in every detail; every part must come up to a standard of perfection before it is allowed to go into the camera. No wonder the Graflex represents the high-water mark of camera-construction.

RALPH J. GOLSEN

IN these days of trickery and sharp practice, especially in mercantile life, it is refreshing to find a case where a conscientious effort is made to satisfy the creditor. In the matter of Ralph J. Golsen, dealer in photo-supplies in Chicago, who went through bankruptcy not long ago, it is gratifying to relate that the trustee — the Royall Trust Company, of Chicago — declared a dividend of twenty-nine per cent. Although a larger distribution would, doubtless, have been more gratifying, the creditors of Mr. Golsen realize that a smaller dividend was within the range of possibility, and they are correspondingly pleased. For some months past Mr. Golsen has resumed business, his firm being known as the Ralph J. Golsen Supply Co., continuing at the old stand — 72–74 Wabash Ave. Chicago.